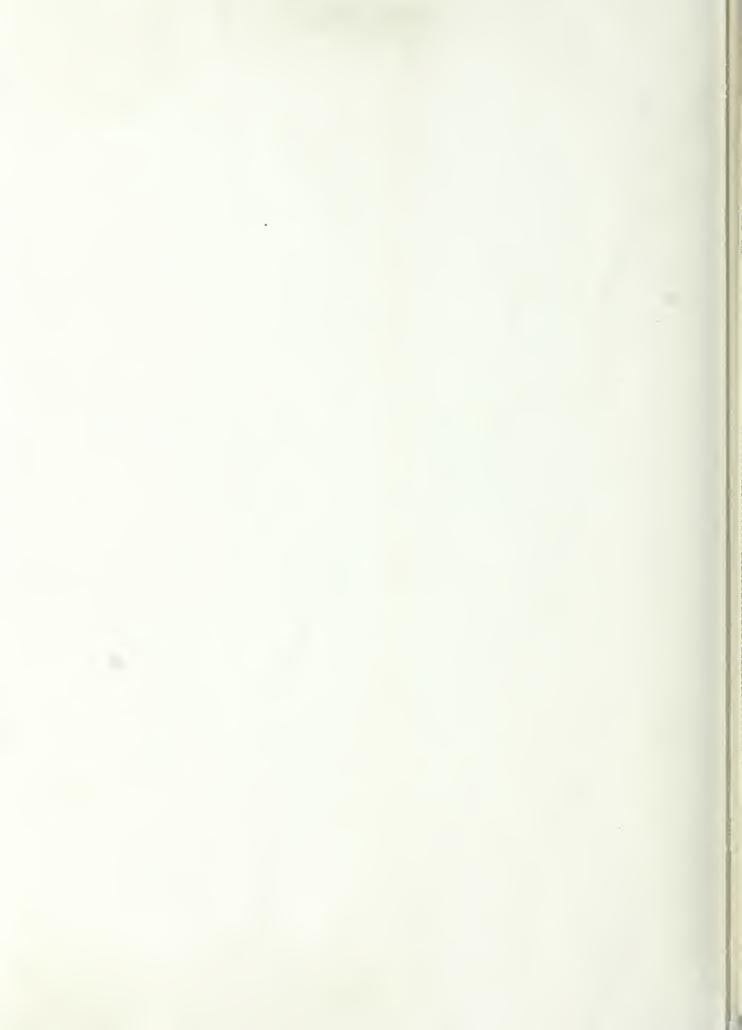
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No. 2173

SEPTEMBER 17, 1921.

VOL. XCV.

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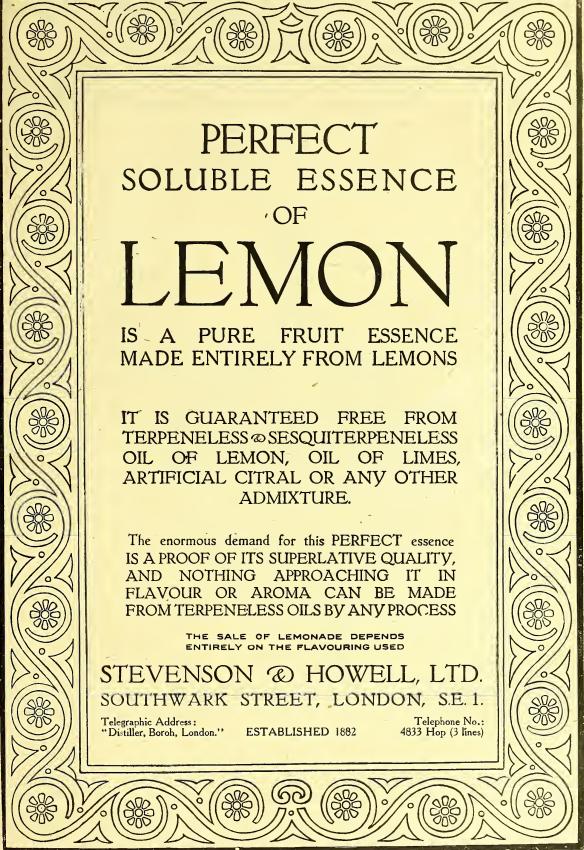
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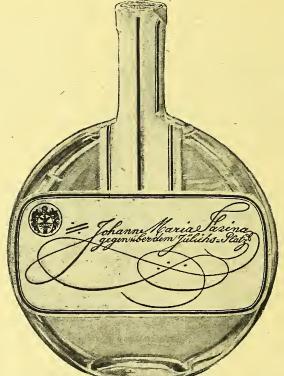
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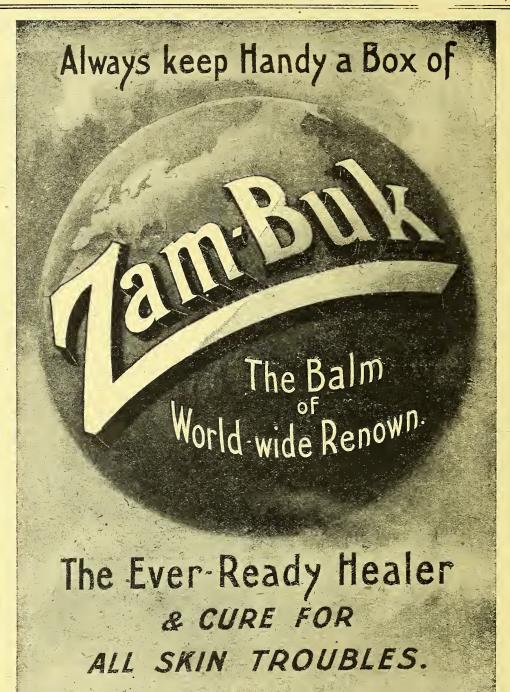
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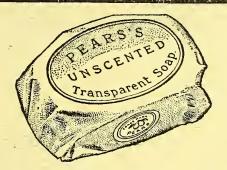
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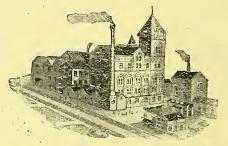
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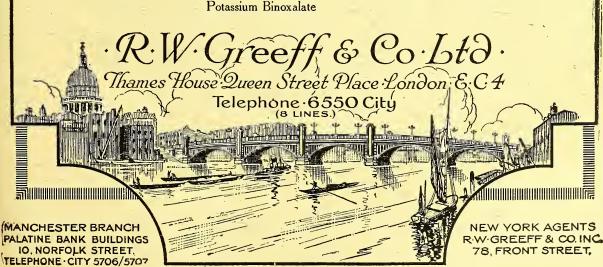
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"FARRIS'S" GENUINE YELLOW BEESWAX

is carefully refined and entirely free from dross of any kind. Supplied also in 4-oz., 2-oz., 1-oz., & $\frac{1}{2}$ -oz. rounds.

FARRIS'S SPECIALLY REFINED PURE SPERMACETI AND STEARIC ACID.

Also Waxes of every known kind and for every purpose.

The only actual Manufacturing Wax Chandler in the City of London

CHARLES FARRIS

Helmet Court, Wormwood Street, Bishopsgate, London, E.C. 2.

(ENTRANCE also BETWEEN 77 & 79 BISHOPSGATE.)

LORIMER-MARSHALL, Ltd.

FOR YOUR

Winter Specialities

Lung Tonic, Children's Cough Mixture, Cod Liver Oil & Cod Liver Oil Emulsion, Honey & Lemon Linctus,

Special Low Quotations for Season's Requirements.

LORIMER-MARSHALL, Ltd., 12 Tower Hill, E.C.3

Factories - Britannia Works, Cold Blow, Hatcham, S.E. 14

Maws



Page

Sept. 17, 1921

No. 518

What's in a Name?— Everything if it's Maw's

For well over a century the name of "Maw" has been familiar to the buying public. It has always been associated with irreproachable quality and reasonable price, and has come to be regarded as the hall-mark of reliability. Therefore, the name of "Maw" has earned the goodwill of the buyer and possesses a definite selling value. Do you realise that this goodwill, this selling force behind the name of "Maw," is the sole property of the retail pharmacist? No other trader can benefit by that goodwill, because goods bearing the name of "Maw" are only sold to bona-fide chemists. The name of "Maw" works for you; the reputation which the House of Maw has won by over a century of strenuous endeavour is yours. Make the best use you can of this ready-made goodwill by using your best efforts to push Maw's goods. Remember, when you sell a Maw's line the quality will do you credit, and build future business which must come to you. The public cannot buy Maw's goods from the hairdresser, the draper, the fancygoods dealer, or any other outside competitors of the pharmacist.

> Buy it at Maw's—the Ancient House with Modern Methods.

Telephoner
City 7
Private
Branch
Exchange

Telegrams:
Eleven
Cent
London

S. Maw, Son & Sons. Ltd...
Aldersgate St., London.

and Barnet,

Cables, Eleven London

Code A.B.C. 44&54 Edition

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START NOW TO INCREASE YOUR TURNOVER



Reg. Trade Mark.

MARSHALL'S "L" BRAND.



Fixed Profit 33½% More on Case lots.

GOOD POSTERS and SHOWCARDS.

Which do you prefer? Small or Large Sales.

IT takes but little, if any more time and effort to sell a large bottle of Marshall's Lysol than it does to sell a small one, and the profit on the larger size is nearly twice as much. Small sales may easily be changed to large ones once you get the idea.

T is quite easy to show the customer—who is usually a woman with a shrewd knowledge of a bargain—that it is cheaper for her to buy an 8-oz. bottle at 1/9 than a 4-oz. bottle at 1/-; many prefer to take the 32-oz. size for 5/- if it is suggested that by so doing they save 3/-

REMEMBER, also, you gain; as it is a characteristic of human nature to be prodigal with that which is present in abundance, the 32-oz. size will hardly outlast eight 4-oz. bottles.

SAVE YOUR TIME BY TREBLING YOUR PROFIT ON EACH SALE

BUT

BE sure it is Marshall's Lysol you sell—it is the Genuine Original "Lysol" and bears the well-known "Trade Mark" which is a guarantee of quality.

SELL your customers the best and they will come to you for everything.

New Illustrated List of "LYSOL" preparations and case terms and discounts on application.

ALL WHOLESALERS WILL SUPPLY MARSHALL'S LYSOL.

LYSOL Ltd., Raynes Park, LONDON, S.W. 20

Makers of Marshall's "L" Brand Lysol—Pebeco—Lysol Soap—Osyl.

Farmers, Poultry Keepers, Shop Keepers, etc., need little reminding that this is what Eats up their Profits

This little reminder can be made by Retail Chemists, who may make the handsome profit of 70% on their outlay from the sales of what has proved to be an Effective, Safe and Scientific

RAT and MICE EXTERMINATOR



"LIVERPOOL Trade Mark Registered VIRUS"

THE AUTUMN PRESS ADVERTISING HAS: NOW: COMMENCED

An improved container has now been adopted. The Bait is now better than ever, and is guaranteed to retain its efficacy for not less than three months. We deeply regret the inconvenience many of our customers have been caused recently through our not being able to promptly execute all orders. The demand has been very big but we are pleased to announce

SUPPLIES ARE NOW PLENTIFUL

For MICE—Retail 1/6 tins or glass tubes, 1/- each; or in not less than ½-doz., 10/- doz.

Net monthly account. Carriage paid in £5 lots.

Wholesale TRIAL ORDER. Retail

1/2-doz. 1/6 for Mice at 10/- = 5/1/2-doz. 2/6 for Rats at 18,- = 9/14/14/
TRIAL ORDER. Retail

6 at 1/6 - - - 9/6 at 2/6 - - - 15/11/-

Profit 10/- = over 70 % on outlay.

Sole Manufacturers:

EVANS SONS LESCHER & WEBB LIMITED

56 Hanover Street LIVERPOOL

New York

60 Bartholomew Close LONDON, E.C.1



USED FIRST, DEFIES DIRT.

The New Preparation which protects the hands from dirt is now being extensively advertised in the following papers:

"THE MOTOR." "THE MOTOR CYCLE."

"THE MOTOR." "THE LIGHT CAR & CYCLE CAR."

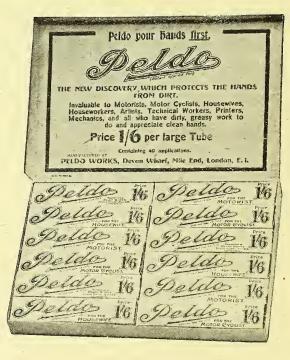
"THE MOTOR NEWS" (published in Ireland).

Are you in a POSITION to MEET THE DEMAND?

1/6
EACH NET
(P.A.T. A.)

Attractive
Window Display
material and
Showcards supplied. Sample
Tubes supplied
gratis in proportion to quantity
ordered.

.......



PRICE 13/6
PER DOZEN

In order to introduce "Peldo" we are offering a special bonus for a guaranteed window display of not less than 14 days as foilows:

On Orders of 1 gross a bonus of 18 full-size tubes On Orders of 6 dozen a bonus of 8 full-size tubes On Orders of 3 dozen a bonus of 3 full-size tubes

Further particulars on application to

C. R. HARKER, STAGG & MORGAN, LTD.

Devon Wharf and Bell Wharf, EMMOTT STREET, MILE END, E. 1.

Repeat Sales are Certain whenever you introduce P.K.L. (Pain-killing) Liniment!

to your customers. P.K.L. is soothing the aches and pains of millions of sufferers from China to Peru, and in most cases establishes itself as a household remedy.

P.K.L. can always be relied upon to promptly relieve Rheumatism, Gout, Lumbago, Sciatica, Bronchitis, Coughs, Colds, Asthma, Sprains, Strains, etc.

These SPECIAL OFFERS are worth considering!

OFFER No. 1.—With an order for three dozen P.K.L., carriage paid, with other goods, we will send fifty descriptive letters bearing chemist's name and address separately enclosed in an envelope with a blotter—each one is a potential salesman. In addition, a good supply of show material, including showcards, testimonials, cards, window bills, etc.

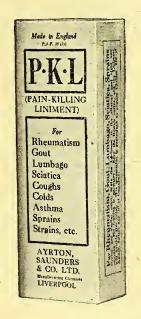
OFFER No. 2.—With an order for six dozen P.K.L., carriage paid, with other goods, we will send 100 letters and show material. Also, on request only, a beautiful hand-coloured, sales-compelling Lantern Slide, bearing chemist's name and address.

OFFER No. 3.—With an order for one gross P.K.L., carriage paid, we will send 200 descriptive letters and show material, also Lantern Slide, on request only. In addition, a bonus of one dozen P.K.L. if an agreement is given to make a two weeks' window display.

P.K.L., Retail, P.A.T.A., per bottle 1/6. Wholesale, per dozen, 12/-; per gross, 144/-and bonus of one dozen.

WRITE TO-DAY FOR SPECIMEN LETTER.

We will send free of charge a bottle of P.K.L. to the senders of the first fifty letters requesting specimen letter received on Monday, September 19th.



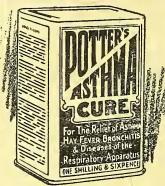
"There's relief in every drop."

AYRTON, SAUNDERS & Co. LTD

Manufacturing Chemists

Hanover Street, LIVERPOOL

Telegrams: "SUNDRIES."



HOW A SUCCESSFUL REMEDY IS PRODUCED

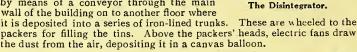
POTTER'S ASTHMA CURE has been advertised at a cost of many thousands of pounds in the leading newspapers, periodicals and journals for the last twenty-five years, and the proprietors, Messrs. POTTER & CLARKE, Ltd., have every reason to claim not only the largest sale in Great Britain, but also in the world.

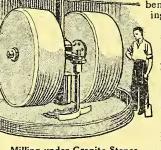
A visit to the store rooms will give an idea of the huge quantity of materials required. Of one of the principle ingredients-Strammonium-the stock (a visible mountain of bales) is never less than 20 tons. On the arrival of the new crop in the Autumn this is very much more. Only genuine Datura Strammonium and Datura Tatula of high alkaloidal value is allowed to enter Withered or old stock and the so-called Spanish or False Strammonium is rigidly excluded, Each bale is passed by an expert before use. fumes of Strammonium when burnt are apt to cause headache, but the additional herbs used in POTTER'S ASTHMA

CURE counteract this. These herbs are first put through huge disintegrators working at a speed of 3,800 revolutions per minute, falling into brick and steel cupboards on the floor beneath. Here they are milled with the other ingredients under Granite Stones 6ft. 6in. high,

each stone weighing several tons, and finally sifted in patent box sifters. The powder is now ready for packing. To save labour and to eliminate dust it is automatically carried by means of a conveyor through the main wall of the building on to another floor where it is deposited into a series of iron-lined trunks.

the dust from the air, depositing it in a canvas balloon. Upstairs in the Carpenters' shop the familiar I gross cases are being made and branded. In the printing room, we see labels being printed in English, French,





Milling under Granite Stones

Dutch and Flemish. A considerable trade is also done with customers' own name, and several popular brands throughout the world are packed here also. In the manufacture of POTTER'S ASTHMA CIG-ARETTES and POTIER'S ASTHMA SMOKING MIXTURE it is necessary to remove all stalk from the herbs. After many years of patient experiments the firm have designed machines to do this, and it is interesting to watch the stalks being ejected from one end whilst the leaves rubbed to the required fineness drop into the cupboard below.

It will be noted the great precautions taken against fire. Concrete floors, iron indow frames, iron doors, and a complete service of Fire Hydrants and extinguishers are equipped thin is model factory.

POTTER'S ASTHWA CURE and preparations were one of the first to be placed upon the P.A.T.A., and there is no doubt that its success is due, apart from its medicinal value, to the friendly co-operation of the pretable. tion of the retailer.



The Pa king Department showing Dust Extractors.



OTTER & CLARK

MANUFACTURING CHEMISTS

60, 62, 64, Artillery Lane, LONDON, E.1 and at 24, Luna Street, Great Ancoats, MANCHESTER.

POTTER'S ASTHMA CURE GIVES INSTANT RELIEF



PASTILLE POINTS 2.

The COATING of

EMULSION ANTISEPTIC THROAT PASTILLES

TO TO THE REAL PROPERTY OF THE
(KERFOOT)

RECENTLY this page was used to describe the superb finish of Emulsion Throat Pastilles (Kerfoot). We spoke of the outward appearance of the coating employed.

Just as the best cut clothes would soon look shabby if tailored out of inferior cloth, so too it is important that a pastille finish should be not only good to look at but fundamentally right in every other respect also.

This is just the claim we make for the coating of Emulsion Throat Pastilles (Kerfoot), a coating invented by us many years ago and differing radically from the established practice of those days.

The hard and glossy surface of the Kerfoot Pastille coating does not collect dust and is always entirely pleasant to taste and smell.

The price of Emulsion Throat Pastilles (Kerfoot) is 3/- per lb. If you already know these pastilles send us your winter order now, and we will see it is despatched on whatever date this year you wish. If you have never stocked these pastilles, order a 7-lb. test parcel to begin with.



THOMAS KERFOOT & COLD BARDSLEY VALE, LANCASHIRE, & Bardsley House, London, N.1

ESTABLISHED 1797.

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The "CULMAK" SHAVING Display Box



(No extra Charge).

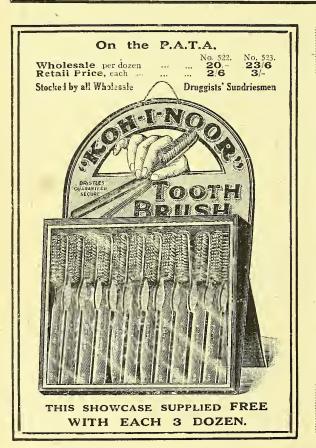
Brushes cost 47/-P.A.T.A. Realise 70/6

AND THE BRUSHES SELL THEMSELVES.

ON THE CHEMIST'S COUNTER THIS SMART DISPLAY ATTRACTS THE CUSTOMER'S ATTENTION.

THE NOVEL, UNORTHODOX APPEARANCE OF THE BRUSH AROUSES HIS CURIOSITY.
THE PRICE AND THE MAKER'S WARRANTY ARE ON THE LABEL. IT'S
GUARANTEED ANTHRAX FREE. HE RISKS NOTHING! HE BUYS ONE!

CHEMISTS! CULMAK CASES CAPTURE CUSTOM.



TUSKOID

Superfine Cut—Non-Inflammable.
Fine Tooth Combs.

- 8/- 10/- 12/- per dozen. Glass-fronted Showcase free with 3 dozen Combs, £1.10.0

GREATLY REDUCED PRICES.

The OSBORNE Dressing Comb.
Strong—durable—grailed finish.

Ivory White Dressing ... Rake ... Black Dressing Rake ... Carded or Boxed

10/- doz.

Or Special Prices for Quantities.

COLOUR-PROOF SPONGE BAGS.

Assorted Art Shades, a Wonderful Seller.

Size 1. 4/6 doz. Size 3. 7/- doz. Size 5. 10/6 doz.

1. 2. 5/3 , . 4. 8/6 , . 6. 12/9 ,

5 % Discount. Cash with Order. Carriage Paid.

Monthly accounts opened if desired.

H. J. LEE & CO. Osborne Works, LANCASTER.

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SPECIAL OFFER

GAUZE NOT SURPLUS

PLAIN ABSORBENT GAUZE (N.H.I.)

> 3 yds. 6 yds. lyd. 9/6 5/2 Dozen 2/7 1 gross **9**/- per doz. 4/11 2/6 5 gross 8/6 4/8 2/5

Plain Absorbent Gauze, HOSPITAL QUALITY

In 6-yard Packets only. 8/-Dozen 7/6 1 gross 7/-5 gross -

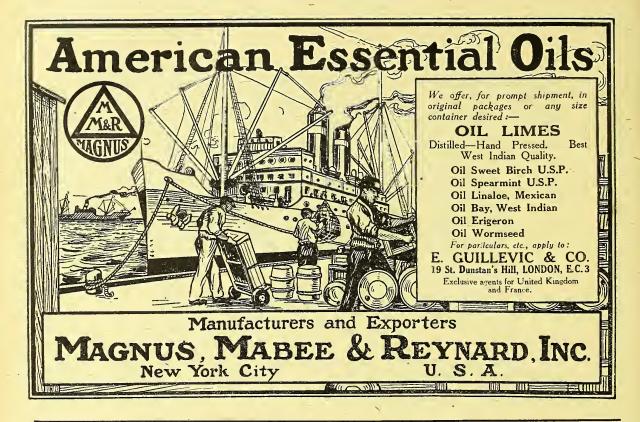
Also in 100-yard Rolls at 9/- per Roll.

ROBERT BAILEY & SON, LTD.

49 & 51 CENTRAL STREET, LONDON, E.C. 1.

Phone: 8744 CITY

"Undisputed, Finsquare, London,"



STEADY DEMAND **PREPARATIONS** TOILET

You may ensure a brisk business in Hair Tonics, Perfumes, Pomades, etc., if you regularly use

CONCENTRATED ESSENCES & COMPOUNDS

THESE exquisite Essences, etc., have a delicate charm which simply delights the most fastidious customer. They are delivered to you in a handy and convenient form which enables you to mix your preparations without the bother of filtering, fixing or blending beforehand. Distilled from Nature's finest products, they are unapproachable for quality and variety. ¶ Send for Free Samples on your business notepaper, or enclosing business card.

PREEMO CONCENTRÉ & ESSENTIAL OIL Co. 63 High Holborn, W.C. 1.

Telephone: Chancery 8095

Shipkoff's Pure Otto of Rose

Nature ordained that Otto of Rose should have certain chemical and physical contents. Fakers design rose oils having the same contents, but they are not Otto of Rose.

Shipkoff's Otto of Rose is Nature's Otto. Before placing your contract be sure to get Shipkoff's sample and price, and try it. Original Sample Coppers in 1, 2 & 4-oz. sizes.

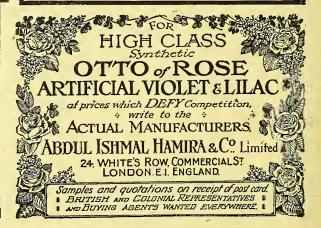
ONCE TRIED-ALWAYS USED.

Highest Awards at all Universal Expositions, including
Four Grand Prizes.

Shipkoff & Co., Kazanlik, Bulgaria.

BRANCH OFFICE IN SOFIA. Model Steam Factories in Kazanlik, Kalofer, Kerlovo and Rahmenlari. London Depot-

G. P. & J. BAKER, LTD., 5 Giltspur St., Newgate St., E.C. 1.



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K. B. MAVLANKAR

Telegraphic Address "EKDUM LONDON."

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Sole European Agent to **ESSENFLOUR** PRODUCTS, LTD., Mysore, S. India.

ESSENTIAL OILS

Synthetic Chemicals Natural Flower Oils

Artificial Flower Oils AMBERGRIS. MUSK.

CIVET

All Indian Essential Oils

Telephone: HOLBORN 2499.

Sole Agent in U.K. to Messrs. POLAK @ SCHWARZ, Ltd., Zaandam, Holland,

DITTA MARIO DE PASQUALE, Messina.

26-27 Hatton Garden LONDON, E.C. 1.

And at 29 CORPORATION STREET, MANCHESTER.

AMERICAN ARMY SURPLUS.

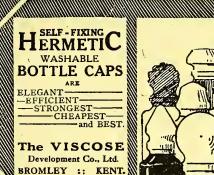
RAZORS

in flat nickel box, best silver-plated Razor with nicke mirror and 12 blades. Priced on box, 25/-9/6 each.

List of other Gillette Razors and Blades at very SPECIAL PRICES on request.

H. A. CANNON (Red Lion House)

27 Cannon Street



DODGE & OLCOTT CO., LONDON, E.C. 3. 20 MARK LANE,



THE "D & O" BRAND

is the "Standard of Quality" for

OILS of BAY, CEDARWOOD, PATCHOULI, PEPPERMINT, SASSAFRAS, ETC.

BALSAMS of Copaiba, Peru, Tolu, TONKA BEANS, Angosturas.

Telegrams—
"EGDARF, FEN, LONDON."

Phone— CITY 2468.

N.V. CHEMISCHE FABRIEK "NAARDEN"

BUSSUM, HOLLAND.

GLYCERINE CHEM. PURE, S.G. 1.26

VANILLIN 100 % CHEM. PURE.

COUMARIN 100 % CHEM. PURE.

SAFROL, PURE.

GERALD BROMAGE & CO., 9-10 Foster Lane, E.C.2

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ROURE BERTRAND FILS, GRASSE.

AVENDER (French), SPIKE LAVENDER (French and Spanish)

NEROLI, GERANIUM (African and Bourbon), SANDALWOOD, PETITGRAIN (French and American), VETIVER (Java and Reunian), ROSEMARY, BOIS DE ROSE FEMELLE, YLANG, &c.

ORRIS CONCRETE and LIQUID.

ESSENCES, SOLIDES and LIQUIDS from flowers. RESINOIDS and POMADES.

We have Stocks in London of the most important Essential Oils and Perfumery Products.

JUSTIN DUPONT, Argenteuil (S. & O Makers of SYNTHETIC PERFUMES

and some of the finest original odours extant, for Sachets, &c.

SOLE AGENTS FOR THE UNITED KINGDOM:
STEPHENS BROTHERS & CO., Offices: 13a FINSBURY SQUARE, LONDON, E.C. 2
Warehouse: 3/4 MALLOW STREET, OLD STREET, LONDON, E.C. 2
Wholesale Houses only supplied.

HOROPH

HIGHEST QUALITY.

ABSOLUTELY PURE.

UNIFORM DELIVERIES.

CHLOROPHYLL C. Oil soluble. Blue Shade. CHLOROPHYLL CG. Oil soluble. Yellow Shade CHLOROPHYLL S. Water and spirit soluble.

THE SANDOZ CHEMICAL CO. LTD., BRADFORD.

WORKS
POLICE
H. RAAB & CO.
ROERMOND, HOLLAND.

Manufacturers of

Base Perfumery Products and Flower Oils.

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MUSK AMBRETTE c.p. 100 % MUSK KETONE c.p. 100 % C.p. 100 % OLEUM-MUSK art.

generally regarded as the

STANDARD.

Sole Representative for the U.K.: •

ALFRED PAUL WHITE, 5 Water Lane,

Gt. Tower Street, LONDON, E.C. 3.

37 Gray's Inn Road, LONDON, W.C.

Toilet Specialities.

			2 Price per doz.	Selling Price
PILENTA SOAP			to Retailer.	P.A.T.A.
A complexion soap.		•	10/-	•/-
PROLACTUM	-	-	10/-	1/-
For the lips.			· ·	•
PARSIDIUM JEL	LY	•	10/-	1/-
For wrinkles.	A BIC	T.	00/0	0/0
ALLACITE of OR. A dressing cream.		SSOM	22/6	2/6
BORANIUM	BLC) 3 3 O IVI	22/6	2/6
A hair tonic.	•	•	22/6	2/6
SILMERINE	-	2	22/6	2/6
Hair curling fluid.			,_	-,-
CLEMINITE	-	-	22/6	2/6
For a face lotion.				
COLLIANDUM	-		22/6	2/6
For a face tint.			00/0	0/0
PERGOL -	-	•	22/6	2/6
STALLAX -	_	_	22/6	2/6
For a shampoo.	_		11/0	2/0
IETTALINE -	-		31/6	3/6
For clearing the skin.			, -	, -
PHEMINOL -	-	•	36/-	4/-
A depilatory.				
TEKKO PASTE	•	•	22/6	2/6
Camphor cream. MENNALINE			26/	a /
For the eyelashes.	-	- "	36/-	4/-
MERCOLIZED W	7AX		31/6	3/6
A face cream.			0.,0	0,0
STYMOL -	-		36/-	4/-
For oily complexions a	and bla	ackheads.		
BARSYDE -	-	•	22/6	2/6
Dandruff eradicator.			00/0	0/0
TAMMALITE For grey or faded hair	•	-	22/6	2/6
LIOUID PERGOL		_ ^	31/6	3/6
To check excessive pe		tion locally		. 0/0
BICROLIUM		-	22/6	2/6
For whitening the han	ds.			
COCONOIDS	-		31/6	3/6
For figure developmen	t.		-0015	- 15
HARAPOSA -	•	-	22/6	2/6
Nut oil shampoo.				

STOCKED BY ALL WHOLESALE HOUSES

COLONIAL DEPOTS AND AGENCIES:

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ALL WHOLESALERS, and
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SOUTH AMERICA: DEARBORN, Ltd., Calla Salta 264, Buenos Aires.

LINES THAT SHOW GOOD PROFITS.

Taylor's Cimolite Preparations. 50 YEARS' REPUTATION.

Of exquisite daintiness and purity. For many years extensively used by the highest families, both as Toilet and Nursery requisites, and supplied regularly to a wide clientèle of Royal and Noble families.

CIMOLITE TO LET POWDER. Boxes, 1/12 (per doz. 9/6) Tins, 3/-, 5/6, 11/- (per doz. 2/7/-, 49/3, 96/-) Bottles, 3/3, 6/6 (per doz. 30/-, 55/6)

CIMOLITE TOILET CREAM. Collapsible tubes, 1/3 (per doz. 11/6)

CIMOLITE SOAP.

Per tablet, 8d.; per box, 2/(per doz. 3 tab. boxes, 20/-)
CIMOLITE FACE POWDER.

Boxes, 1/1½ (per doz., 9/6)
Tins, 3/- (per doz. 27/-)
Bottles, 3/3 (per doz. 30/-)
CIMOLITE SOAP (Violet-Scented)
Per tablet, 8d. per box, 2/-Per tablet, 8d.; per box, 2/-(per doz. 3-tab. boxes, 20/-)-



PREPARED ONLY BY JOHN TAYLOR, Manufacturing Chemist, 30 BAKER STREET, PORTMAN SQ., LONDON, W.1.



Mr. Geo. R. Sims' "Tatcho" and "Tatcho-tone."
A big vigorous impressive advertising campaign, covering the whole of the British Isles, is now being pursued. A vastly increased volume of business is inevitable. Generous profit to the trade has been arranged.



THE HAIR GROWER Price 2/9

Wholesale:

PER DÖZEN.



FOR GREY HAIR Price 4/6

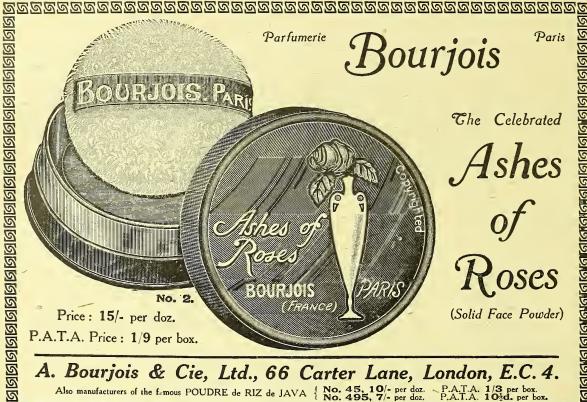
Wholesale:

PER DOZEN.

GEO. R. SIMS' HAIR RESTORER CO.

5 Great Queen St., Kingsway, LONDON, W.C.2.





A. Bourjois & Cie, Ltd., 66 Carter Lane, London, E.C. 4.

Also manufacturers of the femous POUDRE de RIZ de JAVA No. 45, 10/- per doz. P.A.T.A. 1/3 per box.

High-class Concentrated Perfumes made with some of the finest flower oils from the South of France, in high-class rod-stoppered hexagon bottles with gold seals.

ODOURS-

PARMA VIOLET. SWEET PEA. WHITE ROSE. WHITE LILAC. WALLFLOWER. LILY OF THE VALLEY.

FREE FROM SPIRIT.

Above combination mounted on artistic card, displaying One Dozen Bottles.

A very attractive and good Selling Line.

APPLY- A. M. EVANS. 154 CHURCH LANE, MANCHESTER.

We are now manufacturing

Containers & Cases

of various styles in

Imitation Gold

which easily surpasses Aluminium for

The Prices are just as attractive.

Our exhibition of these new imitation gold boxes at the Chemists' Exhibition was a great success. A sample will be sent free to any interested wholesaler or manufacturer.

FRANK BUCKLER, Ltd.

CASTLE WORKS.

Mount Pleasant Road, Tottenham, London, N. 17.

Forhan Advertising Carries This Message to Millions

HE GUMS USE IT AS A DENTIFRICE FORMULA OF Tochongal Specialist in DISEASES OF THE MOUT PREPARED FOR THE FORHANS LTO MONTREAL

Every week millions of newspaper and magazine readers over the country, many of them your customers, are being told the Forhan message.

They are learning that Forhan's For the Gums fulfils the two primary functions of a dentifrice—keeping teeth clean and white, making gums sound and healthy.

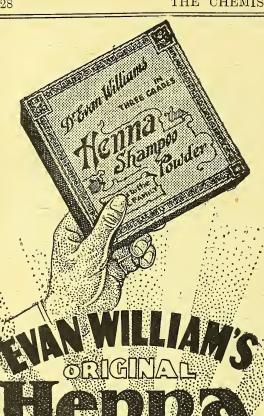
They are advised that Forhan's, used in time, and used consistently, prevents or checks the progress of Pyorrhea, which threatens the teeth and the health of the great majority of adults.

Stock Forhan's For the Gums, and let this unusually effective campaign help bring more business into your shop. May we supply prices and full trade information?

Thos. Christy & Co.
4-12 Old Swan Lane, London, E.C. 4



P.A.T.A.



Your Gustomers will insist on the

EvanWilliams HENNA

SHAMPOO

having been taught by experience. Are you ready to meet their demands?

Stock moves freely at a handsome profit.

Full particulars are in-cluded in The SHAMPOO SALESMAN, which is sent free on request.

The EVAN WILLIAMS CO., LTD.,

CUTEX

Manicure Preparations



No.

1	" " " " " " "		
ı.	"Cutex" the Ideal Cuticle		-
	Remover, Smæll	18/-	2/-
-			
2.	" " " Large	36/-	4/-
4.	"Nail White		
			2/-
5.	" " Polish Cake,	~	
	White	18/-	2/-
,			
6.	" " " Pink	18/-	2/-
7.	" " Trial Size	5/6	7 ld.
			* 2 CL
22.	"Nail Polish Stick,		
	in metal tube	13/6	1/6
0			
8.	" Powder	13/0	1/6
9.	" Polishing Paste,		
•		18/-	2/-
10.	" " " Plain	18/-	2/-
11.	" Liquid Nail Enamel		
13,	" Cuticle Comfort	18/-	2/-
14.	Nail Bleach Powder		
15.	" " Rouge	18/-	2/-
16.			
10.	,, Compact	0=/	01
	Manicure Set	27/-	3/-
17.	, Travelling ,, ,,	84/_	9/6
18.	" Boudoir " " 1	68/-	19/-
31.	" Cold Cream		
٦١.	,, Colu Cream	10/-	-/-

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After a year of stagnation we are now selling perfumes in good quantities. The number of special orders by post and telephone indicate to us that the public are buying freely. Study your stocks and investigate our agencies. Full tariffs and particulars on request.

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Each in box. Large size in silk-lined box. Showcards and Testing Sets supplied.



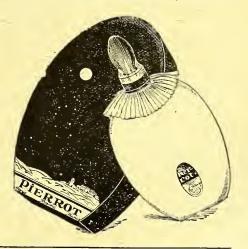
ROSINE '

Paul Poiret's Wonderful Creations.

A series retailing from 21/to 63/- each.

Amazingly striking and beautiful. SHOWING GOOD PROFITS.

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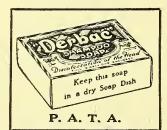
W. H. CALNAN & CO., LTD. 30-32 LUDGATE HILL LONDON :: E.C. 4



SHAMPOO SOAP

THE APPROVED REMEDY FOR PEDICULOSIS

Quickly destroys Pediculus Capitis, Pediculus Corporis, Phthirus Pubis, Sarcoptic Scabies, and the Embryo in the Nit.



Awarded Royal Sanitary Institute Medal, June 19, 1921.

6d. Tabs. 50/- gross. 1/- tabs. 85/- gross.

NON-TOXIC. NON-IRRITANT. SIMPLE AND SAFE.

Write or Phone 934 Bank for further particulars.

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NAIL BRUSHES. CLOTHES BRUSHES. SHAVING BRUSHES.

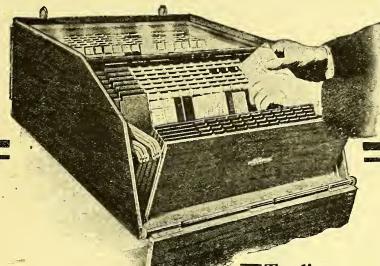
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will save you time, expense and work in handling Credit accounts and give you greater net profit. T dispenses with Daybooks, Ledgers and Monthly Statements.

Keeps accounts posted to date and protects them till they are paid. Collects them more quickly and reduces bad debts. Saves expense of Stamps, Stationery, etc.

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me, without charge cr obligation, further details of the National Credit File.

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NO FLUE REQUIRED, as all products are scientifically condensed. Highly economical. It is the stove for all who wish to increase their service—the stove for YOU.

Our little booklet will in-terest you, and be sent FREE if you write to-day stating if for GAS or OIL.

CLARK'S SYPHON STOVE CO., LIMITED, 164a Queen Victoria St., E.C.4.

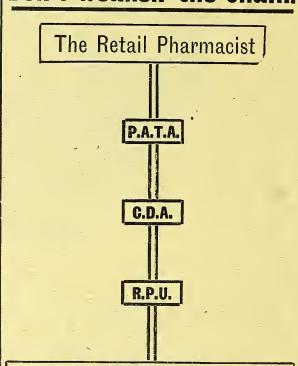


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Thoroughly Overhauled and Rebuilt

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The Winter Session will open on Monday, October 3.

The Winter Session will open on Monday, October 3.

The Hospital is the largest in England, 950 beds are in constant use.

Last year the number of in-patients, 21,639; out-patients, 120,886, attendances, 497,690; dental patients, 4,662; major operations, 7,804.

The MEDICAL COLLEGE AND DENTAL SCHOOL are essentially modern, with large lisboratories equipped with the latest and most approved appliances.

The Staff is so large as to permit of individual attention being paid to all Students.

RESEARCH FUNDS of over £26,000 give unrivalled facilities for medical research.

medical research.

APPOINTMENTS.—Over 160 appointments are made annually from students of the College recently qualified.

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For Prospectus and particulars apply to the Dean (Professor William Wright, M.B., D.Sc., F.R.C.S.), who will be pleased to make arrangements for anyone wishing to see the Medical College and Dental School. Mile End, E. 1.

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IS THE MOST LUXURIOUS SHAVING STICK YET PRODUCED. IT IS THE CHEF-D'ŒUVRE OF THE SOAPMAKER & PERFUMER'S ART.

ITS DELIGHTFUL FLAT SILKY LATHER IS A PLEASING CHARACTERISTIC, AND ITS CHOICE FRAGRANCE IS PROMINENT FEATURE OF UNIVERSAL POPULARITY.

Each stick is packed in an aluminium case, in an attractive carton.

> Wholesale Price, 10/- per doz. Retail Price - 1/3 per stick.

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The Oxygen Tooth Powder

Clean Teeth and Calox

One of the most important contributions to modern science is the realization of the importance of sound teeth in maintaining sound health.

Calox—TheOxygenTooth Powder—helps bring about hygienic mouth conditions; neutralizes the acid that causes erosion; and destroys germs and decomposing particles of food that cause decay and loss of tooth structure.

You can be quite sure of repeat orders when you supply Calox to those who enquire for the best dentrifice.

In two sizes—small and large. Large size is most economical.

McKesson & Robbins Calox may be procured from the following representatives:

British Depot, Messrs. G. B. KENT & SONS, Ltd., 75 Farringdon Road, London, E. C. Canadian Depot, Messrs. LYMANS, Ltd., Moutreal Newfoundland Depot, DIRECT AGENCIES, Ltd., St. Johns

French Depot,
Messrs. ROBERTS & CO., 5 Rue de la Paix, Paris
Belgian Depot, JULIEN D'HOEDT,
50 Rue des Riches-Claire, Brussels

Denmark Depot,
Messrs. MADSON & WIVEL, Copenbagen
Norway Depot, Messrs. A. KOBRO & CO.,
No. 9 Steuersgatan, Christiania
New Zealand Depot,
Messrs. H. O. WILES, Auckland
Messrs. KEMPTHORAL, PROSSER & CO.'S,
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Messrs. WILSON & CO., Madras Y. G. PANDIT, Whiteaway-Laidlaw Buildings, Bombay Straits Settlements, Messrs. GOODALL & CO., Singapore North China, AMERICAN DRUG CO., Shanghai Hawaii, PAN-PACIFIC TRADERS, Ltd., Honolulu

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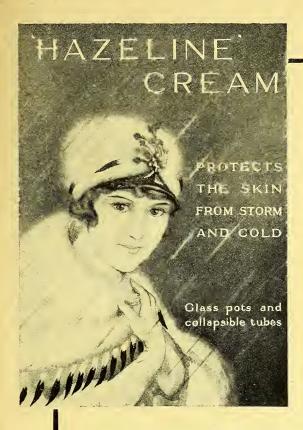
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The supreme skin emollient for autumn and winter use.

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THE CHEMIST AND DRUGGIST is in circulation and reputation the leading journal addressing the Chemical and Drug trades in the British Empire and other countries in the Old and New Worlds. It is the official organ of the Pharmaceutical Society of Ireland, the Chemists' and Druggists' Society of Ireland, and of other Chemists' Societies in the Overseas Dominions.

SUBSCRIPTION RATE
TWENTY SHILLINGS a year payable in advance to any part of
the world, including a copy of The Chemist and Druggist Diary,
Subscriptions may begin with the first issue of any month. Single
Copy, 9d. post free; Diary, 10s., post free. Postal orders and cheques
should be crossed. "Bank of Liverpool and Martins Ltd."

Prix de l'abonnement annuel : le journal une fois par semaine, et l'agenda une fois par an, 20s., franco.

TERMS FOR ADVERTISING may be obtained on application to the Publisher. Head Office: 42 CANNON STREET, LONDON, E.C. 4

Telegrams: "Chemicus, Cannon, London." Telephone: Central 3617 (3 lines).

Branch Offices: 49 County Buildings, Old Millgate, Manchester. (Telephone: City 52)
Melbourne and Sydney, Australia.

	ntents es 2173 Vol. 95
No. 12 Seria	Marriages

Known, Admitted, and Approved Remedies

FOLLOWING the practice which we started some years ago we propose to reserve space in the forthcoming issue of The Chemist and Druggist Diary, 1922, for the registra-tion of formulas for "known, admitted, and approved remedicis." Under the Medicine Stamp Act, 1812, such medicines, when sold by chemists, are exempt from medicine-stamp duty so long as the formulas are contained in recognised works of reference and proprietary rights are not claimed. A clear indication must be given on the label of the medicine to the published formula as evidence that the medicine is of the kind to which the exemption refers. The Chemist and Druggist Diary was the first book of reference recognised by the Board of Customs and Excise, after the British Pharmacopæia, and the Diary, being published periodically, affords an exceptional opportunity for chemists to add any fresh formulas for medicines coming within the definition of "known, admitted, and approved remedies." · Chemists who desire to take advantage of this arrangement should forward true copies of the formulas with the titles and directions for use so that we can include these in the Diary. We shall attach the correct reference numbers to the formulas when they are published. The formulas, which must be written on one side of the paper only, should be sent not later than October 28, addressed to the Editor, C. & D., 42 Cannon Street, London, E.C. 4.

English and Welsh News

The Editor would be obliged if subscribers would send him marked copies of newspapers containing items of interest for insertion in this or other news sections of the "C. & D."

British Trade Ship, Ltd.

A company has been formed, with Earl Grey as chairman and Mr. Edmund Hill (secretary of the Federation of British Industries) among the directorate, for the purpose of building a ship specially designed for a cruise round the world with samples of British-made goods. Subject, it is understood, to the condition that sufficient support is forthcoming by the end of the present year, the construction of a ship of 20,000 tons (gross) will be put in hand, and it is hoped that the voyage will be begun in the summer of 1923. The outward route will be via South America, South Africa, and East Africa, and the homeward route by way of Fiji, Japan, China, Straits Settlements, and India. A stay of from seven to fourteen days at each of thirty-four ports is contemplated, and arrangements are to be made for receiving fresh samples at various places of call: it will thus be possible to change some of the leading exhibits from time to time so as to make prominent those suited to a given locality. There will be eight decks, four of which will be devoted to the exhibition proper. On the other decks there will be exhibition offices, a reception hall, an inquiry bureau, a bank, an insurance office, interpreters' offices, and other appurtenances. The company, as we have indicated, is known as the British Trade Ship, Ltd., and its address is 12 Grosvenor Gardens, London, S.W. 1.

Celluloid Industry Regulations

The Home Secretary has issued draft Regulations (to which objections may be lodged up to September 20), under the provisions of the Factory and Workshop Act, 1901, concerning places in which celluloid, or any article wholly or partly made of celluloid, is manufactured, manipulated, or stored. The draft Regulations include the following:

following:

Stocks of celluloid shall be kept in a suitable place, outside the workrooms, plainly marked "Celluloid Store." Stocks exceeding one hundredweight shall only be kept in a chamber constructed of fire-resisting materials, in which no open light or fire shall be allowed, and which shall not be used for any purpose other than the storage of celluloid.

The store shall not be situated so as to endanger the means of escape from the factory or workshop or from any part thereof in the event of a fire occurring in the store. The amount of celluloid in a workroom at any one time shall be kept as small as is practicable without unduly interfering with the work carried on.

Efficient steps shall be taken to prevent celluloid from coming into contact with open lights or fires, or, except to the extent that may be necessary for the processes of the industry, remaining near thereto.

industry, remaining near thereto.

Adequate means for extinguishing fire, having regard to Adequate means for extinguishing fire, having regard to the amount of celluloid present in the room at any one time, shall be kept constantly provided for each workroom and storeroom. Adequate means of escape in case of fire shall be provided.

Faraday Society

Faraday Society

A discussion on "Catalysis, with Special Reference to Newer Theories of Chemical Action," will be held under the auspices of the Faraday Society, on September 28, at the Institution of Electrical Engineers, Victoria Embankment, London, W.C. 2, at 4.50 p.m. The discussion will be divided into two parts. The first part will deal with the radiation theory of chemical action, and will be opened by Professor J. Perrin, Paris. The second portion of the discussion will be concerned with heteroportion of the discussion will be concerned with heterogeneous reactions, and will be opened by Professor Irving Langmuir, chief research chemist to the General Electric Co., U.S.A. It is expected that Professor Arrhenius and Professor Victor Henri will also be present, and among others who will contribute to the discussion are Professor E. C. C. Baly, Professor F. G. Donnan, Professor W. C. McC. Lewis, Professor A. Lindemann, Professor A. W. Porter, and Dr. E. K. Rideal. Fellows of the Chemical Society are invited, and others interested in the subject may obtain tickets of admission from the secretary, Faraday Society, 10 Essex Street, W.C. 2.

War Memorials

Chance Brothers & Co., Ltd., Smethwick, have placed outside their works a bronze tablet on which are inscribed the names of fifty-five of their staff who were killed in the war. Out of 337 who joined up, 242 have returned to Messrs. Chance Brothers' employ.

The services rendered in the war by the employees of Taylors' Drug Co., Ltd., have been recorded in the entrance lobby of the offices of the company at Burley Hill, Leeds. This record takes the form of a carved tablet containing the names of the 199 who joined the various Services, the units to which they were attached, and the rank and honours they attained. On glass tablets are recorded in gold letters with a black background the names of those who lost their lives, the date when they died, and other particulars. Running round the lobby beneath the glass tablets is the following inscription in gold:

They died that we might live, Hail! and Farewell!

All honour give to those who, nobly striving, nobly fell, That we might live.

The whole forms a dignified and impressive memorial, and it will gain increasing significance as times goes on.

Instances of Alleged Dumping

At a representative meeting, held lately at Nottingham, of manufacturers of lace and embroidery, it was decided to prepare a case for submission to the Board of Trade, in accordance with the provisions of Part II. of the Safe-guarding of Industries Act, in respect of dumping by foreign manufacturers of such goods. It was stated that a deputation from Nottingham had already been received on behalf of the Board, and that a report on the general position of Midlands textile trades as regards imports

Representatives of flint-glass workers in the Midlands have made similar representations, and deputations have pointed out that, unless immediate steps are taken to stop the ever-increasing flood of glassware from Germany, Czecho-Słovakia, and elsewhere, the industry in this country will be killed. In reply the Board of Trade has submitted certain questions, and consideration has been given to these at a joint meeting of employers and operatives at Stourbridge. Full protection for a specified period will probably be asked for, on the ground that manufac-turers have been induced, during the war, to spend considerable sums in improving plant, and that the majority of them are now without orders.

Sale of Weed-killer by Unlicensed Vendor

At Guildford Police Court, on September 2, Ellen Grover, Shere, was summoned for selling weed-killer containing arsenic contrary to the provisions of the Poisons and Pharmacy Act. It was stated that a Surrey County Council inspector, while in Mrs. Grover's shop, saw tins of the weed-killer among articles of food. The inspector warned her son of the consequences which might follow if he did not get a licence. Three weeks later a tin was sold to a customer. The weed-killer had been analysed and was found to contain arsenic. The name of the seller was not upon the tin. Corroborative evidence having been given, the defendant was fined 4l.

Registration of Business Names Act

At Bow Street Police Court, London, on September 12, Messrs. George Arthur Wingfield and Lawrence Arthur Wingfield, solicitors, Cheapside, E.C., were summoned for an alleged contravention of the provisions of the Registration of Business Names Act, 1916. Mr. W. S. Bourne, who conducted the case on behalf of the Board of Trade, stated that the defendants were father and son, and had carried on business under the style of Wingfield & Son. This, it was contended, constituted an offence, because the Act required that every firm carrying on business under quired that every firm carrying on business under a name which did not consist of the true surnames of all the partners without any other addition than their Christian names should be registered, and the defendants had

not in fact registered. The Magistrate: If they are Wingfield and his son the son's name must be Wingfield. not in fact registered. to describe it as Wingfield & Wingfield. Is there any objection to that? Sir Ernest Wild, K.C., defending: As a matter of fact, we have now altered it to Wingfields. The Magistrate: There should be a certain discretion in taking proceedings. It is a purely technical point. Mr. Bourne: There was a flat refusal to register. His worship dismissed the case under the Probation of Offenders Act. Sir Ernest Wild said he would have been quite prepared to go on with the case. "The Board of Trade are really not very officious," he added, "but they must have something to do.'

Contracts

The following tenders have been accepted by the bodies named:

Eton Guardians.-Griffith & Walden, chemists, drugs,

H.M. Prison Commission.-Brook, Parker & Co., Ltd., drugs, etc.

Weymouth Guardians.-Mr. M. T. Evans, chemist and druggist, dressings.

Trowbridge and Melksham Guardians .- Mr. J. H. Aplin, chemist and druggist, druggists' sundries.

Wholesale Druggists' Cricket Championship

A match was played at Walthamstow on September 10 between Allenburys C.C. and The B.D.H.C.C., to decide the winners of the silver cup for this season. Each of these two clubs had lost one match only, and the game was consequently a very interesting one. Allenburys were the winners for the fourth year in succession, their score being 67, against B.D.H. 37. The league table stands as follows:

	Played	Won	Lost	Points
Allenburys	. 9 .	8	1	16
В.Д.Н	9	7	2	14
Burgoyne	-8	4	ō	-8
Evans Lescher	8	ī	7-	2
Stevenson & Howell	8	ī.	7	2

Poisonings

The following cases of fatal poisoning have been re-

corded since our last report:

At Richmond, Surrey, the wife of Councillor Arthur Howitt, the lessee of an hotel, committed suicide by drinking lysol while of unsound mind. A medical witness at the inquest stated that, on making a post-mortem examination, he found 3xj. of fluid, apparently chiefly lysol, in the stomach. There was a history of insomnia and neurasthenia in the case, with a resultant tendency to

sudden impulsive action.

The Westminster coroner held an inquest, on September 8, on the body of Mary Jane Greenwood, Cumberland Street, S.W., mother of an assistant dispenser at the Army and Navy Stores and widow of a medical practitioner. The evidence showed that death was due to a vermin-killer, and that the deceased had previously taken salt of lemon-recovering, however, from its effects. A verdict of "Suicide while of unsound mind" was

recorded.

An inquest was held in Chelsea, S.W., on September 13, on the body of Mr. Harry Dudley, L.M.S.S.A., who, the evidence showed, was found dead on September 11 at the Westminster Infirmary, where he was locum tenens. Dr. T. P. McQuaid, senior assistant medical officer at the infirmary, said that Dr. Dudley was in a very poor state of health and incapable of much exertion. He constantly treated himself for asthma by injections. On the witness being called to the deceased's bedroom he found that the dressing-table was in disorder, and there were tablets strewn about. These tablets contained morphine and other powerful drugs. There was a tumbler near the bed, and it contained, he believed, a solution of omnopon. A hypodermic syringe was near the tumbler. Dr. Donaldson, St. George's Hospital, who made the post-mortem examination, said that death was consistent with an overdose of omnopon, and was due to narcotic poisoning. The coroner, after reviewing the evidence, recorded a verdict of "Death through misadventure."

Birmingham

The pharmacy session at the Municipal Technical School opens on October 3.

Medicos at local voluntary hospitals do not like the Dangerous Drugs Act, and, generally speaking, find it both difficult and irksome to comply with.

The Birmingham General Dispensary is advertising for "a well-educated lady as articled pupil"; term, one year; premium, 201. In these days of index-numbers, the fee is of some interest.

Liverpool

The Merseyside and Southport Pharmaceutical Freemasons have made fixtures for the second Wednesdays of the coming October, January, March, and June.

On the question of high rates, it is declared that any educated person can recoup himself or herself by the judicious use of the directories, maps, and so forth in commercial and other free libraries.

Non-subscribers to the C. & D.—of whom there are a few left—were more than usually keen in borrowing copies of the issue of September 3 in order to gain full information concerning the free indemnity scheme.

Cuts in the price of vacuum flasks are as common in Liverpool as in Birmingham (C. & D., September 10, p. 34). Labels marked "1s. 11d." are visible in some windows, and "the best flask on the market" is ticketed 3s. 11d.

The whist-drive and dance (the latter a new departure) with which the session of the Liverpool Chemists' Association is to be inaugurated will be held on October 5 at 6.45 P.M. at the Britannia Rooms, Cunard Building. Mr. John Jones and Mr. Paley will act as M.C.'s.

A man who described himself as "a veterinary surgeon from the Isle of Man" has made a tour of local pharmacies, offering for sale a small parcel of hydrocyanic acid. The parcel bore the label of a leading wholesale house, and the offer was met with shakes of the head.

Manchester

The enlarged Royal Exchange, which is to be opened by the King on October 8, is a new building except for a few external features. It is the fourth Manchester Exchange, and the third upon the present site or thereabouts. The reconstruction has taken seven years to complete.

Alarmist paragraphs concerning German designs on British trade have been circulated during the past few days, apparently on the strength of the fact that a federation of dyeing firms in Germany has notified its customers that for dyeing silk goods an advance of 33½ per cent. comes into force as from September 1. The more reasonable explanation appears to be that the federation reduced its charges a year ago in the expectation of securing lower costs of production. Instead of costs becoming lower, however, a campaign for higher wages is being actively carried on. It is now generally admitted by German economists that the margin hitherto maintained in respect of the average price of international commodities cannot be continued indefinitely and is tending to disappear.

Miscellaneous

Poison-licence Application.—The Aspatria Agricultural Co-operative Society, Ltd., Aspatria, has applied to the Cumberland County Council for a licence for the sale of poisonous sheep-dips.

FIRE.—On September 12 an outbreak of fire occurred at the premises of the British American Glass Co.. 13 Charterhouse Street, London, E.C. 1. A district call was circulated, and the fire was extinguished after considerable damage had been done.

PATENT RESTORATION.—Carl Beindl has applied for the restoration of lapsed patent 7260 of 1915, "An improved process for the production of hydrocyanic acid," which was granted to the Public Trustee. Notice of opposition should be made on Patents Form No. 17 on or before November 7.

ESSENTIAL OILS LECTURES.—Mr. C. T. Bennett, B.Sc., F.I.C., Ph.C., is giving a special course of lectures on the chemistry and technology of essential oils at the Borough Polytechnic Institute, Borough Road, London, S.E. 1. Particulars of the course, which begins on September 26, can be had from Mr. C. T. Millis, the principal of the Institute.

Society of Leather Trades Chemists.—A conference of the Society of Leather Trades Chemists was held in London on September 7, 8, and 9. Among those present were Dr. J. Gordon Parker (President), Mr. F. H. Carr (Institute of Chemistry), Mr. W. F. Reid (Society of Chemical Industry), Dr. R. H. Pickard (Chemical Society), and Mr. L. Archbutt (Society of Public Analysts). Professor J. Eyre stated that the Royal Microscopical Society had instituted a leather section, with a view to assisting research.

Dental Exhibition.—The International Dental Exhibition opened at the Royal Horticultural Hall, Westminster, on September 12, and closes on September 16. Among the novelties or quasi-novelties are an installation capable of producing a radiograph of the mouth in seven minutes, an automatic electric dental mirror, and violet-ray high-frequency generators. The last-named are used for relieving pain before or after operation, and for the treatment of pyorrhæa. A colorimeter for matching shades of enamel before filling teeth is also on view.

Trinitrotoluene and its Intermediates.—The Department of Scientific and Industrial Research announces the publication of a report entitled "Manufacture of Trinitrotoluene (TNT) and its Intermediates." [Stationery Office: 178. 6d.] The three sections of the report deal respectively with (1) history, (2) plant and process, and (3) manufacture of 2:4-dimitrotoluene. This is the second of a series of records in connection with the Department of Explosives Supply of the Ministry-of Munitions, the first being a report on the recovery of sulphuric and nitric acids from acids used in manufacturing explosives. [128. 6d.]

REARRANGEMENT IN TELEPHONE SYSTEM.—In order to relieve the pressure on the London trunk telephone exchange, the majority of the provincial towns within a radius of about twenty-five miles from the centre of the Metropolis are being placed under the control of a new exchange to be known as "Toll," which, it is hoped, will be in working order on or about September 17. The lines will be increased in number by 20 per cent. Under the new system, any subscriber asking for a Toll number will be switched on to the new exchange (in Norwich Street, E.C. 4), and will there be put into direct connection with the subscriber asked for. In most cases the call will be put through while the caller waits, as in the more local services.

"Whiffs of Chloroform."—An inquest was held in Westminster, on September 8, on the body of Joseph Elder (67), who, the evidence showed, died from syncope while a severed artery was being "picked up" at Westminster Hospital. The lady doctor who administered the anæsthetic stated in evidence that she gave 4 drachms by the open method. Asked by the coroner why the anæsthetic was not given in the ordinary way, Dr. Thomas, the surgeon in charge of the case, said it was such a small cut that he did not think it worth while. The coroner said that he was not in favour of giving whiffs of chloroform. It was much better to give an anæsthetic in the usual way and do it properly. In his opinion an operation should not be done until the patient was under surgical anæsthesia. He recorded a verdict of "Death by misadventure."

Mr. W. Bredt, late director of Widenmann, Broicher & Co., Ltd., has arranged to commence business on his own account at 20 Heneage Lane, Bury Street, London, E.C. Telephone number: Avenue 6954. Telegraphic address: "Jalap, London."

"GREAT DISCRETION."—The Huddersfield coroner, in the course of an inquest held by him recently, expressed the view that great discretion should be used with regard to headache-powders, and that small shopkeepers should not be allowed to sell them.

Irish News

Brevities

Tenders are invited by the Londonderry District Asylum Committee for medicines for three months from October 1.

A coroner's jury at Kilkeel on September 7 found that Lizzie Caughey, aged fifty-five, died from excessive drinking of methylated spirit.

In the North of Ireland it has been a common experience for doctors, since the Regulations came in, to have their prescriptions sent back to have the name signed in full.

Mr. J. D. McClelland, Ph.C., has opened business at Main Street, Randalstown, co. Antrim, as a dispensing and veterinary chemist. He was formerly with Butler & Co., Dublin.

Mr. John J. Dowling, M.A., who, at the meeting of the British Association held at Edinburgh on September 8, described an ultra-micrometer recorder, of his own invention, capable of indicating a movement of one-thousandth part of a millionth of an inch, is the second son of Mr. Joseph J. Dowling, secretary of Boileau & Boyd, Ltd., wholesale druggists, Dublin.

In view of the general situation in Ireland it has been thought advisable not to fix a date at present for the all-Ireland meeting of the chemists and druggists, which was originally to have been held on August 31 to consider the questions of the Dangerous Drugs Act Regulations, the status of chemists and druggists and registered druggists, and the question of compounding prescriptions.

Belfast

The Police Committee of Belfast Corporation has granted a renewal of the licence under the Poisons and Pharmacy Act, 1908, to Alex. Dickson & Sons, Ltd., florists and seedsmen, Garfield Street, Belfast.

The Rev. Frederick Hatch, M.A., B.D., rector of the Abbey Church, Waterford, who has been unanimously elected general secretary of the Church of Ireland Young Men's Society, Clarence Place, Belfast, is a younger brother of Mr. James W. Hatch, a member of the representative staff of the United Chemists' Association, Ltd., Cheltenham.

The second annual excursion of the employees of Elliott, Thompson & Blair, wholesale druggists, 12 and 14 Corporation Street, took place on September 10 to Newcastle and Rostrevor. The party left Belfast at 9.15 A.M. in a motor charabanc, the first stop being at the Spa, Ballynahinch. Newcastle was reached after a fine run, and dinner was served in the Donard Buildings Hotel. The journey was continued via Annalong to Kilkeel, and Rostrevor was reached about 3.30, where tea was served at the Great Northern Hotel. Mr. D. C. Sterling, as chairman, referred to the fact that Mr. McAloney was leaving to go into business for himself. He had been seven years with the firm as traveller, and they wished him every success. Miss D. Dowdall, on behalf of the employees, handed a gold watch to Mr. McAloney, who suitably replied. A vote of thanks was passed to the firm for granting the day and providing the charabanc.

Scottish News

Scottish Chemists' Bowling Association.

The annual competition for the Ayrton Saunders trophy was held on West Ferry Green, Dundee, on September 7, in ideal weather conditions. Edinburgh, Glasgow, and Forfarshire were well represented. Play lasted from 1.30 to 4.30, and interest was keen, the teams being very well matched. At one time it looked as if a scratch Dundee rink were to lift the cup, but a Glasgow rink, skipped by Mr. G. Shiach Kitchin, came away very strongly at the finish, and romped home with a majority of 18 shots over Forfarshire (Mr. Ritchie, skip), who deserved better fortune. High tea was subsequently served in the Royal British Hotel, Mr. Kitchin (President) occupying

the chair. Tea over, and the loyal toast having been duly honoured, Mr. Kitchin thanked the Dundee bowlers for the admirable arrangements they had made for the competition. Mr. Milne replied, proposing the health of the visitors. Mr. C. Stephen, Ph.C., presented the prizes to the winners, Mr. Kitchin responding in a humorous speech. The score is as follows:

*			STORE
Skip		Skip	up
G. S. Kitchin, Glasgow	26	v. A. W. Ritchie, Forfarshire	8 = 18
C. A. Livie, Dundee	25	v. C. Brown, Edinburgh	10 = 15
G. M. Davie, Dundee	22	v. A. Paterson, Edinburgh	20 = 2
Harvey P. Arthur,			
Glasgow	2.4	v. G.F Johnston, Dundee	22 = 2

The following office-bearers were elected for the ensuing year: President, Mr. J. Robertson Milne, Dundee; Vice-President, Mr. Harvey Arthur, Glasgow; Secretary and Treasurer, Mr. J. Simpson, 268 Crown Street, Glasgow. The Committee was re-elected with power to co-opt. It was decided to hold the competition in June next year, at either Perth or Stirling if suitable arrangements could be made. An enjoyable evening of song and story followed.

Brevities

Several Dundee chemists had windows broken during the recent outbreak of rioting.

Mr. A. A. Williamson, chemist and druggist, late of Stockton and formerly pharmacist and radiographer to Leith Hospital, has purchased the stock and premises of Mr. McDonald, Stanley, Perthshire, and will carry on the business under the style of The Stanley Pharmacy.

The annual conference of the British Commercial Gas Association will be held at the Royal Technical College, Glasgow, on September 27 and 28, under the presidency of Mr. D. Milne Watson, M.A., LL.B. Some of the sessions are open to visitors and relate to subjects of general interest—e.g., the prevention of smoke-pollution.

The Dick Botanical Prize (value 11. 1s.) has been awarded to Miss Margaret Combe (Boots, Ltd., 15 Leith Walk, Edinburgh). The competition was a practical examination on the work of the summer session, and Miss Combe obtained 95 per cent. of marks. The prize is offered by Mr. Robert Dick (Duncan, Flockhart & Co.), and the competition is open to all apprentice and undergraduate members of the Edinburgh Chemists', Assistants', and Apprentices' Association.

Summer Outings

Portsmouth Chemists' Motor Trip

A PARTY of Portsmouth pharmacists and lady friends went by charabanc to Liphook on September 7. The outward journey was made via Butsor Hill and Petersfield. A "Forest" tea was provided in the grounds of the Anchor Hotel at Liphook, Mrs. A. B. Sparrow and Mrs. W. R. Atterbury, wives of the President and Vice-President respectively, acting as hostesses. Sections then formed for tennis and bowls. The return journey was made via Farnhurst, Midhurst, and Chichester. Mr. W. A. Coates acted as M.C.

Birmingham Chemists' Motor "Run."

The Birmingham Pharmacists' Motor Club "Run" on September 11 to Stratford-on-Avon proved to be a great success. Over seventy members and friends participated. Piloted by Captain Spark, the party left Birmingham Town Hall about 11 A.M. and arrived at Stratford a little after 1 P.M., where they were joined by visitors from various parts of the district. Steam-launches were waiting to convey the party up the river to Liddington, where lunch in picnic style was purveyed. Returning to the Swan's Nest about 5 P.M., "high tea" was served, after which the President, Mr. J. W. Atkinson, welcomed the visitors, and explained that the Birmingham Pharmacists' Motor Club was, as far as he knew, the only one of its kind in England. The party returned from Stratford about 7 P.M.

Association Affairs

Edinburgh.—A meeting of the Executive Council of the Scottish Pharmaceutical Federation was held recently, the President (Mr. James Jack, J.P.) in the chair. statement from the auditors intimated that it was impossible for them to submit a statement for the year in time for this meeting, owing to many of the branches not having had their books completed in time for the annual audit. The secretary read a statement regarding Insurance, suggesting three additional clauses be added to the existing policy. After discussion, it was unanimously agreed that these conditions should be submitted to the branches for their approval. A letter was received from one of the branches intimating that an investigation should be made into the cost of department of a chemist's business, so that a definite percentage of profit could be arrived at. After discussion, it was agreed to defer this matter until a scheme had been presented to the Executive. A committee, consisting of Messrs. Arthur, McNab, Coats, McEwan, the chairman, and the secretary, was appointed to go into the matter concerning chemists' lines, so that certain lines could be reserved for chemists. A letter from the Pharmaceutical Society of Great Britain, North British Branch, intimated that at a meeting of the Executive of the North British Branch a committee had been appointed to meet a similar committee of the Scottish Pharmaceutical Federation to condider the whole situation with reference to local organisation in Scotland. After discussion, a small committee was appointed. A letter was read from Mr. Weir, of Clydebank, intimating that the chemists in his area were willing to join the Federation and become a unit. A well-known stocktaker has offered his services to the Federation; the matter was deferred to the next meeting. The President reported on the action taken by the Federation in connection with the Dangerous Drugs Regulations, and intimated that corre-Society of Great Britain and the Scottish Pharmaceutical Society of Great Britain and the Scottish Pharmaceutical Federation, and reported that the Society had intimated that they were obtaining the opinion of Mr. MacMorran. So far no further word from the Society has been received. The treasurer submitted a small account for legal expenses incurred in defending a member of the Glasgow Branch, and was authorised to pay it.

Hull.-The Hull-Pharmacists' Association held a meeting on September 7, at which a large number of chemists were present to hear Mr. J. P. Gilmour (editor of the "Pharmaceutical Journal") give an address on State Protection of Pharmacy. Mr. Gilmour first reviewed the pharmaceutical legislation in our own and in other countries, both of the past and of the present. China, for example, has had pharmacy laws for ages, the regulation and control of the sale of poisons being one. Ancient Greece and Rome had a similar set of pharmacy laws. The Middle Ages had practically no control or regulation of pharmacy. It was the all-conquering Moor who, when he overran Spain (and ultimately Europe), first established apothecaries' shops. The first laws applied exclusively sively to poisons, such as arsenic and calomel. France was the first State to have anything like State protection of pharmacy, and it has existed from the fourteenth century. In Germany, Prussia particularly, there were State pharmacies. The proprietors were granted a monopoly, and certain restrictions were imposed on the sale of poisons and medicines. One has to come to comparatively modern time before any real progress can be traced. Mr. Gilmour then described in detail various laws (as they existed before the recent war in Europe) in Russia, Spain, Austria, Italy, and France. Turning to the New World, one finds that until recently there was no attempt to regulate pharmacy, and even now there is not a Federal law governing the whole of the States. In Texas, for instance, anyone can set up as a pharmacist. It is a remarkable fact, however, that though the foremost plank of the American druggist is business, they are a better educated set of men than the British chemists. (It is nasty medicine, but it is wholesome.) The American course

of education for pharmacy is on a much higher level In this country the existence of State protection of pharmacy can be traced back as far as 1340, when a Poison Law was introduced by the Tudors. In the eighteenth century the apothecaries tried to pass a law to prevent chemists from dispensing medicine. The next legislation in pharmacy is the Act of 1852, but the Acts of 1868 and 1908 constitute the full measure of the State control of pharmacy up to the Dangerous Drugs Act of to-day. "We must make up our minds whether we have got enough State control, or whether we want more." Up to a certain point State control is necessary. If legislation is obtained to separate dispensing from prescribing it will not be an unmixed blessing. There never have been reforms which did not mean the loss of some privilege hitherto held, but in the long run such a separation will be for the best. The lesson to be drawn from the foregoing is that a minimum of State control and protection is to be preferred, and is in the best interests of both pharmacists, pharmacy, and the public generally. Several members asked questions. Mr. E. H. Earl moved a vote of thanks, and Mr. Jones seconded the vote, at the same time asking why certain associations appeared to be favoured with regard to the insertion of reports. This was satisfactorily explained.

New Companies and Company News

P.C. means Private Company and R.O. Registered Office

RAINBOW DYES, LTD. (P.C.).—Capital, 2,000l. Objects: To carry on the business of dyers, cleaners, chemists, drysalters, oil and colour men, etc. Solicitors: J. J. Edwards & Co., 28 Sackville Street, London, W. 1.

Lengs, Ltd. (P.C.).—Capital 1,000. Objects: To carry on the business of chemists, druggists, perfumers, ctc. The first directors are: A. E. Leng and Mrs. N. Leng, 205 High Street, Acton, W. 3. R.O.: 205 High Street, Acton, London, W. 3. Gerald Bromage & Co., Ltd. (P.C.).—Capital 5,000l. Objects: To take over the business of a general dealer in

Gerald Bromage & Co., Ltd. (P.C.).—Capital 5,000%. Objects: To take over the business of a general dealer in essential oils and perfumery carried on by G. Bromage at 9-10 Foster Lane, E.C., as "Gerald Bromage & Co." R.O.: 9-10 Foster Lane, Cheapside, London, E.C.

Beard & Co., Ltd. (P.C.).—Capital 500l. Objects: To acquire the business of a chemist and druggist carried on by Florence S. Beard at The Pharmacy, Pennycomequick, Plymouth. The permanent directors are: Mrs. Florence S. Beard, 6 Winston Avenue, Plymouth; Miss Gwendolen C. Lewthwaite, M.P.S., 1 Upper Knollys Terrace, Alma Road, Plymouth; and T. S. Eyre, 6 Clarendon Place, Citadel Road, Plymouth. R.O.: The Pennycomequick Pharmacy, Saltash Road, Plymouth.

Jamaica Salt Co., Ltd. (P.C.).—Capital 5,000%. Objects: To carry on the business of manufacturers of and dealers in salt and by-products of salt manufacture, chemicals of all kinds, including magnesium chloride and sulplate, magnesium bromide and iodide, potassium chloride and sulphate and potash salts, and any derivative from salt or sea water; importers, exporters, brokers, refrigerators, shipowners, charterers of ships or vessels, ctc.; to acquire, improve, and cultivate estates, lands, and hereditaments in the West Indies, and to adopt an agreement with A. T. W. Henshaw. R.O.: 23 Austin Friars, London, E.C. 2.

A. Ruch & Co., Ltd.—This company is being wound up, the assets and diabilities being assumed by A. Ruch & Co., glass-bottle makers, 28 Martin Lane, Cannon Street, London, E.C. 4. The change has been made owing to the special taxation to which limited companies are subjected.

Kerol, Ltd.—This company, which was registered recently (C. & D., May 14, p. 39), has taken over the business of Quibell Brothers, Ltd., manufacturers of disinfectants, sheep-dips, etc., Newark. The last-named company is being voluntarily liquidated, the works and offices being taken over by Kerol, Ltd. Mr. T. H. Lloyd, F.I.C., F.C.S., will manage the new organisation.

Society of Chemical Industry

SIR WILLIAM POPE, F.R.S., President of the Society of Chemical Industry, delivered an address at the annual meeting in Montreal on August 29. He dealt with the question of

THE MANUFACTURE OF CHEMICAL PRODUCTS

within the British Empire. One of the vast problems which the war has bequeathed is that of determining how the faculty which we exhibited in the manufacture of chemical products during a period of emergency is to be diverted and utilised for peace purposes and for meeting the normal requirements of the world's commerce. Before the war we were dependent on Germany for bromine and for coal-tar colours, and upon the Dutch colonies for quinine; the price of these and other essential products quickly rose to famine prices, although no reason exists why they should not be produced within the Empire just as conveniently and just as cheaply as abroad. All the bromine we require could be obtained as a result of the introduction of rational chemical methods into the production of salt from sea-water in India; all the quinine required could be furnished cheaply by the scientific cultivation of cinchona in our Colonies; and the British production of complex organic explosive materials during the war has entirely swept away the ancient propagandist doctrine that the manufacture of fine organic chemicals, including coal-tar dyestuffs, is incompatible with the British temperament. All these are matters of great importance; but one further consideration has become accentuated during recent years, and accentuated by the fact that the major portions of the tropical regions of the world are administered by the English-speaking and the Latin nations. In the past we have endeavoured to build up our chemical industries far too much on the lines which proved so fruitful in Germany. He was speaking not of the heavy-chemical industry, in which we have always been to the fore, but of those industries which involve the production or the use of a great variety of more or less complex organic compounds. The organic chemist has long had before him, as one great object of his work, the artificial production of the myriads of organic compounds which we find among animal and vegetable products; he may be justly proud of his achievements in this direction, and the success attained justifies our belief that we shall within quite a short time be able to prepare in the laboratory any compound substance formed by the animal or plant. Immediately some important natural product of commercial value is produced in the laboratory, the German technologist has sought to convert the laboratory method into a works process capable of competing with that of the plant or animal. From the standpoint of the German economist this course of action was sound; Germany had but few colonies, and those few, since the German Government did not possess the art of colonial administration, were a source of considerable expense to the Fatherland. We have relieved Germany of this expense, and have probably thereby given a stimulus to the German instinct for making in a chemical works those chemical products given to us by tropical nature.

THE OBJECT OF TECHNOLOGY

The suggestion that we have erred in adopting German views concerning the methods and aims of chemical technology, without reflecting that economic conditions in Central Europe are entirely different from those which prevail in the British Empire regarded as a whole, perhaps calls for some explanation; the necessary elucidation may be furnished by considering the ultimate object of technical chemical effort. The object of all technology consists in converting raw materials of inorganic or organic origin into products of greater value by expending upon them a certain amount of labour and a certain amount of energy. To a Central European nation labour means high wages to its population and energy means mainly coal or waterpower; only one type of technological process is thus in the main to be considered, and this is one in which certain raw materials enter the works to be handled by costly labour and to be treated by the burning of fuel, which is another form of costly labour. We have other methods

for obtaining similar results, methods which are available in many cases but have been worked out in only a few cases. Let us consider one specific example. During the war, Germany was successful in producing indiarubber in her chemical works; as converting into a works process the method for the polymerisation of a hydrocarbon of low molecular weight to give rubber, discovered as a laboratory operation by Tilden and Bouchardat many years ago, this was a fine achievement, but there is no doubt that the costs of production were high. When we consider, however, that many of the rubber plantations are in British territory, that curtailment of output has been necessary to keep last year's production down to about 350,000 tons -all the world could absorb-and that the cost of production was in the neighbourhood of 25 cents per pound, it will be realised that the British Empire has a technical method for producing rubber which is a far sounder business proposition than the German synthetic processes. Our raw materials result from rubber plantations, the establishment of which is not costly, the labour employed is cheap tropical labour, and the energy utilised is that of the sun's heat, which does not require to be mined and transported on railway trucks. Since the world's annual consumption of rubber will certainly increase rapidly and since our rubber plantations can already produce more than the world's present requirements, it is clear that we are in possession of a process for making indiarubber, using cheap labour and gratuitous energy, which, if conducted on scientific lines, will always defy competition from the chemical works of Central Europe.

SYNTHETIC METHODS OF MAKING NATURAL PRODUCTS

It would not be fair to deprecate the installation of synthetic methods for manufacturing complex natural products. Nature in general furnishes us with but one very complex member of any particular class of organic compounds. Thus, the numerous plants which produce indigo yield but minute proportions of other compounds of a similar type, and, in this instance, the chemical technologist has succeeded in manufacturing a whole range of valuable dyestuffs of the indigo family which do not occur among vegetable products; his efforts have to this extent been amply justified, but it is difficult to believe that synthetic indigo itself would ever have been able to compete in the market if a similar amount of scientific skill and intelligence had been devoted to the improvement of the cultivation and utilisation of the indigo plant. The work which is now being done by Armstrong, Davis, and others on natural indigo may well result in the re-establishment of the Indian indigo plantations, which many decades ago brought such a substantial contribution to the financial prosperity of our Empire. Other similar examples are available. During the Russo-Japanese war large quantities of camphor were manufactured in the German chemical works, but this production was killed so soon as the Japanese camplor laurel started to produce after the war. The wider recognition of the fact that chemical technology largely neglects what per-liaps should be regarded as its most important mode of operation may, at no distant time, be forced upon us as an entirely economic necessity. The densely populated temperate regions of our globe will demand for their consumption and dissipation ever-increasing quantities of energy, and the sources of energy in those regions-coal, oil, water-power, etc.—are diminishing rapidly. We shall be forced to set up a scheme for transporting to our northern countries the energy so lavishly sent from the sun to tropical lands. It is by no means impossible that the day may soon come when vegetable oils, produced in the tropics, will be brought northwards for use as an economical form of fuel. With these considerations in view it same time for our chemical technologists to in view, it seems time for our chemical technologists to devote more attention than they have heretofore to practicable methods for utilising the surplus energy of the tropics in supplementing the waning supplies of energy available in colder climates.

MODERN ORGANIC CHEMISTRY

Another aspect of this question forces itself upon us. The last century has witnessed two great phases in the development of practical chemical work. Roughly speaking,

it may be said that the progress of chemistry up to about forty years ago, great though that progress was, resulted from the application of rather fierce methods; a time came, however, when it was recognised that much was to be learnt, especially in organic chemistry, by the study of delicately balanced reactions in which the practical methods applied were devoid of violence and in which conditions, such as concentrations, temperatures, and the like, were carefully controlled. The organic chemistry of to-day does not distil fragile organic compounds through red-hot tubes; it proceeds by more subtle methods which, nevertheless, have greatly developed the broad knowledge of the science bequeathed to us by our predecessors. In its adoption of milder modes of operating and its consequent application of energy at a low potential, organic chemistry is approximating in its laboratory methods to those which occur in plants and animals; but the chemical changes which occur during the course of animal or vegetable life are still far more complex than those brought about in the laboratory. complexity doubtless arises from the utilisation of low potential energy in the living organism; temperature changes of more than one degree Centigrade are not permissible in the healthy animal organism. The great majority of the chemical reactions which take place in living matter occur catalytically in colloidal media. While the first great epoch in the history of organic chemistry was marked by the application of violent experimental methods, the second developed milder modes of procedure; the third epoch, which is in course of inauguration, will bring us into direct competition with the experimental chemical methods practised by living matter. It is impossible to doubt that a vast expansion of organic chemistry will be witnessed by many of us, an expansion which will result from an imitation of the gently effected chemical operations carried out in the animal and vegetable creation.

IMITATING NATURE'S CHEMISTRY

While this prophecy is not a mere surmise as to the nature of the next step forward to be taken by the science of organic chemistry, but is rather of the nature of a logical deduction from past events, it is perhaps surprising that more use has not been made of the chemical methods of living matter for technological purposes. On a technical scale, the activities of living organisms have been harnessed in the production of alcohol, acetone, glycerol, and acetic and citric acids from sugars, and the pathologist has been wonderfully successful in directing similar activities towards the rectification of abnormal vital processes; much has also been done in the bacterial treatment of sewage and the separation thereby of valuable plant foodstuffs from the very dilute solution in which these occur in effluents. When the immense variety of chemical operations performed by living material is considered, it must be concluded that the manufacturing processes just mentioned, important though they are, are but a minute fraction of those which could be econobut a minute fraction of those which could be economically applied to the production of useful organic compounds if the scientific study of the subject had been sufficiently developed. This subject would seem to be of particular importance to the development of chemical technology in the British Empire, which includes within its domain every range of climate and every species of animal and vegetable life. If we were able to establish an organisation for the study of methods and processes for the manufacture by biochemical agencies of useful chemical products we should reap a rich harvest.

SPECIAL NEEDS OF THE EMPIRE

Apart from questions of the desirability of plant culture for the purpose of increasing the yield of valuable products and of the study of biochemical methods for manufacturing necessary chemical substances, both of which are of vital interest to us, although perhaps of more purely academic interest to other nations, another problem presents itself to us. A wide expanse of Empire brings with it exposure to a great variety of different types of parasitic life; these may be merely vegetable pests, like the prickly pear which is giving so much trouble in North Australia, or they may be such as cause diseases which

render European life precarious in certain regions. The chemical technologist of to-morrow will need protection in the shape of methods for combating these ills, and up to the present far too little progress has been made in this direction. It is true that the prickly pear is destroyed by spraying with arsenic chloride; but this is a mass treatment which is expensive, dangerous, and only locally effective. It is true also that great success has been attained in the prevention or eradication of tropical diseases by inoculation with serum or by the injection of chemical materials. But notwithstanding the progress which has been made in these directions, the whole subject involved is but in its infancy; and although British institutions for the study of tropical diseases and of parasitic plants have contributed much, in comparison with their means, it cannot be denied that Germany has also done splendid service by the study in its State-supported institutions of the very vital problems which arise. This source of scientific help will not be avail-able in the future; it cannot be expected that a nation which only retains an academic interest in ills which no longer affect its own economy will preserve an active interest in fighting these tropical plagues. That the interest in fighting these tropical plagues. That the question is an urgent one—one which should interest our great manufacturers and merchants-finds illustration in the fact that over 90 per cent. of the inhabitants of the Fiji Islands and of Malaya are infected with hook-worm; it would be difficult to estimate the extent to which production is limited by this plague in regions which are among the most fertile in the world.

THE STUDY OF PETROLEUM

All the foregoing are questions which will necessarily become urgent at some no distant date, and most of them will call for the breaking of more or less new ground by the chemical technologist. Of others which seem to have been long ripe for study mention was made of one. Although we are in possession of very complete knowledge of the constituents of coal-tar, a very common raw material, and have developed an elaborately detailed scheme for utilising those constituents in the manufacture of valuable chemical products, no real effort has yet been made to deal in a similar manner with crude petroleums. It is common knowledge that crude petroleums are very complex mixtures of organic substances, just as is coal-tar, and also that a great variety of mineral oils are available in large quantities, each quite different from the others in the chemical nature of the hydrocarbons of which it mainly consists. No systematic attempt has yet been made to classify the various petroleums according to their chemical character, to separate from them pure chemical compounds, and to endeavour to utilise these in the chemical industries. So far as petroleum is concerned our present attitude resembles that which we maintained a century ago towards coal-tar; it is regarded as only fit to burn. A vast field of chemical activity lies before us in the scientific study of petroleums and in the device of processes for utilising the valuable individual compounds which they certainly contain in the expansion of chemical industries.

Retail Pharmacists' Union

Leicester.—A meeting of the local branch of the Retail Pharmacists' Union was held on-September 7. Mr. F. W. Goodess presided, and introduced a discussion on The Dangerous Drugs Act. Questions were asked on difficult points. The dilution of laudanum and its dangers were commented upon. While no resolution was passed on this point, the general feeling of the meeting was that this practice should be discouraged. The resolution was passed: "That the Leicester and Leicestershire Pharmaceutical Joint Committee be asked to reconsider the scale of wages between the Assistants' Association and the local branch of the Retail Pharmacists' Union." The suggested rules for the branch were confirmed by the meeting, with additions, and the secretary was requested to forward them to headquarters for confirmation.

National Association of Opticians

THE annual general meeting of the National Association of Opticians was held recently in the Royal Technical College, Glasgow. There was a good attendance of members. The President (Mr. A. Hershberg) occupied the chair. The seventh annual report was read, showing that seventy-seven new members had been added to membership—the largest number yet elected within a similar period of time. The report concluded by expressing the Council's thanks to the local secretaries and members generally for their help and support. The chairman, in moving the adoption of the report, commented at some length on the work accomplished by the Council since the last annual meeting. He specially emphasised the importance of calling a conference of local secretaries, forming a London branch of the N.A.O., instituting examinations for ophthalmic opticians, and providing instruction. In conclusion, after referring to the donation of 2l. 2s. by the Association to St. Dunstan's, and the indebtedness of the N.A.O. to Mr. J. W. Watkinson, Walkden, for acting as auditor, the chairman moved that a letter of thanks be forwarded to Mr. A. Wood, West Hartlepool, in recognition of his valuable services while on the Council, to which he had been elected in 1915, and from which he had now resigned. This was carried unanimously. The report and balance-sheet were afterwards unanimously adopted. The voting for four councillors resulted in the election of the follow-ing: Messrs. E. Moevius, L. Moreton Parry, H. W. Daykin, and C. Adams. Mr. J. W. Watkinson was reelected auditor for the ensuing year.

The next business was the consideration of the following resolution of the Council: "(a) That the Council recommends to the members of the N.A.O. the desirability of instituting an examination scheme for opticians, and (b) that it further recommends that arrangements be entered into for providing a suitable course of instruction at an approved institution." Mr. T. S. Baird, Glasgow, dwelt on the advantages that would accrue to their Association, and the benefit to members individually, if the resolution of the Council were adopted. It would be possible to hold examinations in different centres, and so students would avoid the expense and loss of time incurred by having to travel to London, as at present. Mr. L. Moreton Parry, in moving the adoption of clause (a) of the resolution, remarked that the N.A.O. was hampered by not having an examination scheme in connection with it, although he thought examinations, as a rule, were a poor test of real knowledge. However, a course of study in practical and visual optics was necessary, but the Council did not contemplate instituting a complicated examination scheme. The clause was carried unanimously. Clause (b) was then considered, and Mr. Parry suggested that the word "may" be inserted between the words "arrangements" and "be." The clause as amended was carried unanimously. It was decided that the next annual meeting be held in London.

Votes of thanks were passed to the retiring President, treasurer, and secretary, and to Mr. T. S. Baird for making the arrangements for the annual meeting.

"C. & D." Indemnity Scheme

We desire to thank the many C. & D. subscribers who have, by telegraph and post, sent appreciative references to the £500 Free Indemnity for Chemists, announced in our issue for September 3. We are very gratified at the way in which the scheme has been received. Application forms for the indemnity are now ready, and arrangements are well forward to issue the individual policies so soon as the scheme comes into operation in October. Inquiries on special points are being answered by post.

"LES ECHOS," the French weekly commercial review, has issued a special number, in English, dealing with the industries of France.

Personalities

Professor C. S. Sherrington, President of the Royal Society, has been appointed President of next year's meeting of the British Association, which will be held in Hull.

MR. George Foster, retired chemist and druggist, Todmorden Road, Burnley, who was in business in the town for fifty-nine years, has just celebrated his eighty-third birthday.

MR. A. E. J. Andrews, who for the last twenty years has covered the West of England, Midlands, and South Wales, has joined the staff of Bayley & Co., soap-makers and perfumers, Tower Hill, London, and will now represent them in the same districts.

MR. JOSEPH THOMAS, chemist and druggist, Garstang, has received news from the United States that a Buff Orpington hen, one of five entered by him in a Philadelphia egg-laying competition, has laid 262 eggs in 280 days, and bids fair to create a twelve months' record.

At a fancy-dress carnival and dance held at the Steyne Gardens, Worthing, recently, Miss Sybil Martin, daughter of Mr. W. E. Martin, pharmacist, won the first prize as an Indian princess. The carnival was promoted by the chamber of trade, the President of which is Alderman W. T. Frost, chemist and druggist.

MR. LEON COOPER, President of Cooper & Cooper, Inc., New York, and director of Cooper & Cooper Chemical Co., Ltd., Suffolk House, Laurence Pountney Hill, London, E.C., has arrived in England on the steamer Olympic, and is making his headquarters at the office of the London company. He expects to be in England for about a month.

The Registrar of the Institute of Chemistry directs attention to an erroneous statement in Part IV. of the "Journal" of the Institute, to the effect that Dr. P. C. C. Isherwood, a director of W. J. Bush & Co., Ltd., had been appointed to a lecturership in the University of Cambridge. Dr. Eric K. Rideal is Humphrey Owen Jones lecturer in physical chemistry at the University.

ALDERMAN MEREDITH T. WHITTAKER, Mayor of Scarborough, has purchased "The Scarborough Daily Post" and "The Scarborough Weekly Post," the former of which will be discontinued on October 1. Alderman Whittaker, who is remembered by visitors to this year's British Pharmaceutical Conference for his sumptuous reception and his eloquent speeches, is also the proprietor of another Scarborough paper.

Mr. Louis K. Liggett's friends among the Rexall druggists are taking steps to aid him in his financial difficulties. The Rexall Loyalty Trust Fund (says the New York "Drug and Chemical Markets") will receive subscriptions, and agrees to pay 6 per cent. per annum on such funds. These funds will be used to take over Liggett's United Drug and Liggett's International stock, together with his home, and the fund-will hold the securities until the market has recovered.

In a recent issue of "The Isle of Thanet Gazette" an account is given of the business of D. T. Evans, Ltd., the conversion of which from a private concern to a limited company was announced in the C. & D., August 27, p. 46. The business was established in 1889 by the managing director of the company at 1 High Street. Branches were shortly afterwards opened at 12 Cliff Terrace and 188 Northdown Road, Cliftonville. Subsequently other branches were set up at 8 Station Road, Westgate-on-Sea; at Public Hall Buildings, Birchington; at 30 Harbour Street, Ramsgate; and at High Street, Broadstairs. Mr. D. T. Evans was elected Mayor of Margate in 1907, on which occasion (C. & D., II., 1907, p. 749) we gave a biographical outline of his career. Every member of the staff will have a direct financial interest in the expansion of the business.

According to a Reuter telegram, a decree published in Paris annuls the prohibition on the export and re-export of petroleum and other mineral oils from France.

Birth

TAVENER.—At Simla, on August 22, the wife of C. P. Tavener, M.P.S. (F. Bliss & Co., chemists), of a daughter.

Marriages '

DIXON-POPE. At St. Winifride's Church, Wimbledon, London, S.W., on September 7, William Leslie Dixon, chemist and druggist (of The Chemist and Druggist editorial staff), 102 Merton Hall Road, Merton Park, S.W., to Agnes N. Pope.

HERMAN—STONES.—At St. Luke's Church, Liverpool, on September 8, by the Rev. A. J. Macdonald, John Bartholomew Herman, chemist and druggist (of the firm of R. & J. Herman, chemists), to Gertrude Alice, only daughter of the late Mr. James Stones, Boothstown, Man-

Deaths

Ashford.—At 50 Gold Street, Northampton, on September 10, suddenly, Mr. Evan Charles Ashford, chemist and druggist, aged seventy-seven. Mr. Ashford, who was born in Carmarthenshire, went to Northampton in 1863 as an assistant to Messrs. Welchman, chemists. He passed the Modified examination in 1868, and subsequently established the business in Gold Street, which he personally conducted till the end. Of a genial disposition, Mr. Ashford was very popular in the town, and on the occasion of his golden wedding last year received good wishes from many friends and customers. He served a term of office in 1904 as Vice-President of the Northampton Pharmacists' Association and was a founder of the local Cymric Society, but otherwise took little part in public affairs. A widow, two sons, and four daughters survive him: one of the sons is Councillor F. C. Ashford, chemist and druggist, St. Leonard's Road.

BAXTER.—At Rio de Janeiro, on September 6, following an operation for appendicitis, Mr. Albert Victor Baxter,

managing director of the Erasmic Co., Ltd., 22 Blooms-bury Street, London, W.C-1, Warrington, and Paris, aged fifty-four. Mr. Baxter was appointed general manager to the company on its forma-tion in 1898, and became managing director in the early part of 1914. He was a keen and courteous man of business, well versed in organisation and administration, and gifted with an unusual degree of foresight in the matter of fashion in public taste. It was largely through his energy and acu-



MR. A. V. BAXTER.

attained their renown, both in this country and abroad. Three weeks ago Mr. Baxter sailed for South America in the company's interests; he was taken ashore, ill, at Rio on September 5, and an operation was performed without success on the following day. It has been arranged that the funeral will take place in England. The suddenness of Mr. Baxter's death comes as a painful shock to those who were associated with him in his work; he was a member of the Masonic Lodge of Friendship, and made many friends in the course of his career. He leaves a widow and a daughter.

Hampson.—At Leigh, Lancashire, on September 7, Mr. William Hampson, Ph.C., 73 Chapel Street, aged fifty-four. Mr. Hampson had been in business in Leigh for a considerable period. On the formation of the Leigh and District Chemists' Association in 1912 he was elected its President, and filled the office for two years. Mr. Hampson was known locally as an enthusiastic photographer and cyclist, and was held in high esteem.

GILES.—At 117 Crown Street, Aberdeen, on August 29, Mr. William Giles, J.P., chemist and druggist, aged seventy-three. Mr. Giles

served his apprenticeship to the late Dr. Reid, Aberdeen, and qualified in 1871. In the following year he commenced business in Crown Street, and successfully carried it on until, quite recently, the condition of his health became serious. Two photographs of his pharmacy appeared in THE CHEMIST AND DRUGGIST, II., 1908, pp. 153, 154, on the occasion of the visit of the British Pharmaceutical Conference to Aberdeen. From the first Mr. Giles took an active part in local pharmaceutical affairs, and in later years



MR. WILLIAM GILES, J.P.

he was successively vice-chairman (1908-18) and chairman (1918-19) of the Executive Committee of the North British branch of the Pharmaceutical Society. He was also for some time a member of the Aberdeen parish council, of its lunacy board, and of several other public bodies.

INGRAM.—At his residence in Johannesburg, on July 30, Mr. Fred. Ingram, pharmacist, of Hospital Hill. Mr. Ingram had been in business in Johannesburg since the finish of the Boer War. Though in failing health for some time, his death came as a shock to his friends in Johannesburg. The funeral was attended by a large number of chemists, as well as a good proportion of the French residents of the Rand, to whom he was well known, through Mrs. Ingram's activities among the French community during the war period.

Coming Events

This section of the "C. & D." is reserved for advance notices of meetings or other events. These should be received by Wednesday of the week before the meetings, etc., occur.

Saturday, September 17

The Grocery and Allied Trades' Twenty-fifth International Exhibition and Market, Royal Agricultural Hall, London, N., at 10 A.M. till 5 P.M. Daily up to 8 P.M. until September 23.

Thursday, September 22

Rexall Chemists, Imperial Hotel, Russell Square, London, W.C., at 130 r.m. Meeting of agents who have not signed the Boots' proposal.

M. Delacre, pharmacist at Brussels and author of a work recently noticed in the C. & D. (August 13, p. 60), has been awarded the bronze medal of the Reconnaissance Française for "lending aid and assistance to fugitive French soldiers."

Post to Russia.—It is announced that private persons in Russia may not receive, by letter or parcel post, goods of certain classes, among which are "dangerous" drugs; nor may they receive, without a special permit, more than two parcels a month containing articles for their personal use. Among such articles are soap, perfumery, and "simple" medicinal products such as boric acid. Articles falling within these categories are admitted free of duty. Parcels for Soviet departments are not subject to restriction.

PRINTED PAPER RATE.—The British Drug Houses, Ltd., are circulating with their price-list the following note regarding the Post Office regulations:

The postage on "Printed Papers" is now 1d. for 2 oz. or

Postcards or other open forms bearing orders must have the word "Order" printed on them to be admissible as "Printed Papers"; if they contain anything in the nature of a letter they will be liable to the higher rate—viz., 12d.

for postcards and 2d. for letters. Advices of returns, unless on forms printed specially for that purpose, also must be stamped $1\frac{1}{2}d$. when a postcard is used, or 2d. if placed in an envelope.

Trade Notes

GAUZE.—New prices for absorbent gauze are given in the announcement of Robert Bailey & Son, Ltd., 49 and 51 Central Street, London, E.C. 1.

SI Central Street, London, E.C. I.
WOODBURY'S FACIAL SOAP.—Henry C. Quelch & Co.,
4 and 5 Ludgate Square, Ludgate Hill, London, E.C. 4,
have been appointed agents for Woodbury's facial soap.
HAZELINE CREAM.—Burroughs Wellcome & Co., Snow
Hill Buildings, London, E.C., offer a new showcard referring to Hazeline cream. An illustration is given in the firm's advertisement.

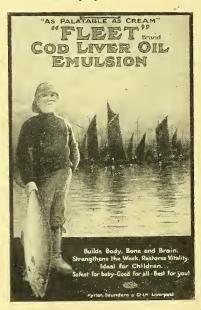
PHARMACEUTICAL MACHINERY.—John J. Griffin & Sons, Ltd., Kemble Street, Kingsway, London; W.C. 2, are sole British agents for the Arthur Colton Co., Detroit, U.S.A., who specialise in pharmaccutical machinery. illustration in Messrs. Griffin's advertisement shows one of the company's tablet machines.

POTTER'S ASTHMA CURE.—An interesting advertisement in this issue gives an illustrated account of the manufacture of Potter's asthma cure, made by Potter & Clarke, Ltd., 60, 62, and 64 Artillery Lane, London. E. 1. The asthma season is at hand, and chemists will be reminded that stocks of winter remedies need filling up.

FREEMAN'S CHLORODYNE.—Freeman'S Chlorodync, Ltd., Kennington Park, London, S.E. 11, are sending out a small showcard (4½ in. by 6 in.), lettered in white on a black ground "Freeman'S Chlorodyne Stops Diarrhœa." On the back of the card are useful reminders, including one that the sale of the preparation is not affected by the Dangerous Drügs Act.

EAU DE COLOGNE.—Blackaller & Pleasance, 8 Laurence Pountney Hill, London, E.C. 4, sole agents for the "Genuine" eau de Cologne of Johann Maria Farina. Gegenüber dem Julichs-Platz, Cologne, call attention to a new form of packing—a watch-shaped bottle. The actual form of the bottle, size, and price are given in the firm's advertisement.

AYRTON'S ACTIVITIES .- Ayrton, Saunders & Co., Ltd., 34 Hanover Street, Liverpool, send us a sample of "P. K. L." (pain-killing liniment), which they are advertising in this issue. The liniment, which is packed in panelled bottles and cartons, sells well in the winter season. Lantern slides prepared from a humorous sketch



are being supplied for advertising "P. K. L." in local cinematograph theatres, and chemists will be supplied with these slides on application. In connection with the Fleet brand cod-liver-oil emulsion a new showcard is being issued. This is shown in the illustration, but the original, measuring 15 in. by $9\frac{1}{2}$ in., is in bright colours. The card will be ready for distribution at the end of the month.

CLARK'S SYPHON STOVES .- The season for installing shop-warming stoves is approaching, and Clark's Syphon Stove Co., Ltd., 132 Queen Victoria Street, London, E.C., put forward the claims of Clark's syphon stoves as the most suitable for chemists' shops. A précis of the report on the tests made with the stove by Dr. R. Lessing, F.C.S., can be obtained on application.

ATRAX TRAYS.—Thos. Christy & Co., 4, 10, and 12 Old Swan Lane, Upper Thames Street, London, E.C. 4, send us samples of the Atrax trays which they have introduced. These are shallow wooden trays, veneered in dark oak or fumed oak, and are used for displaying groups of articles on the counter or in the shop window. The trays, very attractive in appearance, measure from $6\frac{1}{4}$ in. \times $4\frac{1}{2}$ in. to $17\frac{1}{2}$ in. \times $9\frac{1}{4}$ in., and are supplied in five sizes or in a nest of five at 10s. 6d.

Cotarnine.—Mr. J. N. Rakshit, chemist to the Government Opium Factory, Ghazipur, India, a pupil of Sir P. C. Ray, published in the "Transactions of the Chemical Society," 1915, a paper dealing with the metallic derivatives of alkaloids, in the course of which research he first prepared cotarnine in India. Since then Mr. Rakshit has continued the investigation and has devised a process for making cotarnine on a commercial scale. Indian opium is much richer in narcotine (from which cotarnine is made) than opium from other sources, thus placing India in the position of being able to supply large quantities. Cotarnine is used as an internal styptic. Mr. J. H. Hill, managing director of the Government Opium Factory, Ghazipur, who has helped to bring Mr. Rakshit's product to a successful issue, should be addressed by those requiring supplies of cotarnine.

Trade-marks Applied for

The figures in parentheses refer to the classes in which the marks are grouped, for a list of which, with particulars as to registration, see "The Chemist and Druggist Diary," 1921, p. 300.

(From "The Trade-marks Journal," September 7, 1921.)

(From "The Trade-marks Journal," September 7, 1921.)

"PNNITAS"; for disinfectants (2). By G. Frow, 6 Honor Oak Rise, London, S.E. 23. 415,717.

"Vermico"; for chemicals (2). By J. Dyson & Co., Ltd., South Lane, Elland, Yorkshire. 417,007.

"Diocaide"; for all goods (3). By Society of Chemical Industry in Basle, 141-227 Klybeckstrasse, Basle, Switzerland. 415,927.

"Antox Orol."; for medicinal chemicals (3). By Tokalon, Ltd., 212-214 Great Portland Street, London, W. 1. 415,948. (Associated.)

"Earlux"; for appliances to aid the deaf (11). By Bloom's, Ltd., 7 Ridgmount Street, London, W.C. 1. 415,359.

"VITAMINOSE": for all goods (42). By W. Dederich, Im-

"VITAMINOSE": for all goods (42). By W. Dederich, Imperial Buildings, Ludgate Circus, London, E.C. 4.

perial Buildings, Ludgate Circus, London, E.C. 4.
415,906.

"FENOLINE"; for all goods (42). By Kittel & Co., Ltd.,
5 Fenchurch Street, London, E.C. 3. 416,379.

"SEDEC"; for food substances (42). By Lever Bros., Ltd.,
Port Sunlight, Cheshire. 416,618.

"ENOLIN"; for tooth-brushes, tooth-picks, and combs (50).
By A. Carreras. 207 King Street, Hammersmith,
London, W. 6. 415,745. (Associated.)

"CHAMPON"; for beverages (44). By Idris & Co., Ltd.,
120 Pratt Street, Camden Town, London, N.W. 1.
416,661.

"Mac-Lac" on oblong label; for perfumery, etc. (48). By
the Penslar Co.. Corner of Brooklyn Avenue, Detroit,
Mich., U.S.A. 416,967.

Information Department > INFORMATION WANTED

S/129. Rat Nip	M/139.	Hampson &	Scott's
S/129. Whiting Adams' rubber- set		veterinary tions	prepara-
C/139. Bond's beaver cement C/139. Carasa liquorice juice	S/89.	Bacillacine brush	shaving-

ODMATION SUDDITED

IIII OKMATIO	N GOFFLIED
Tins for holding health salts,	"Marvel" whirling spray
ointments, etc., H/79 "Enterprise" tincture press,	"Koh-i-Noor" tooth - brush,
D/79 Ching's worm lozenges, M/308	S/99

Observations and Reflections

By Xrayser II.

Dalton's Atomic Theory,

I suppose, still holds good as regards the chemical changes brought about between atoms, but he would be amazed by the changes that have been discovered within the atom, as we, or our descendants, may yet be amazed by further discoveries in the atoms of other elements than those the radioactivity of which has already been demonstrated. The liberation of energy which might result if the atoms of every element were broken up as those of radium, for instance, have been, is appalling to think of. Astronomy, with its immense spaces and innumerable worlds, to which ours, so important to us, is like a speck of dust in the balance, has hitherto been regarded as the most astounding of the sciences, but chemistry is bringing nearer home to us the sense of the tremendous physical forces among which we live, and over which, with all our science, we have so imperfect a control. That such control as we have is, as we have lately seen, as liable to abuse as to beneficent use, is a still more disquieting fact that sometimes makes one wonder whether Science is justified of her children, and may not prove the parent of as many evils as blessings. We must, at any rate, agree with Tennyson that "she is the second, not the first"; "a higher power must make her mild."

"Possibly More,"

in your article on "Safeguarding Chemical Industry," might safely have read "certainly more." At least I have never known a tax imposed on any commodity that did not immediately result in an increase of something like double the amount of the tax in the price of the article before it reached the consumer, or rather, I have known one exception, that of the increased tax on tobacco when Sir M. Hicks Beach was Chancellor of the Exchequer, when the consequent loss on the cheaper kinds of tobacco fell on the retailer, and caused much hardship to small shopkeepers. The only tobacconist in a certain village I know well attempted to pass it on to his customers; a general boycott of his shop was therefore established by them, and all local smokers who broke it were promptly ducked in the horse-pond. We may be quite sure that the retail pharmacist, who may be regarded as the consumer in this case, will have to pay a good deal more for the drugs, etc., affected.

The Press Comments

on the Dangerous Drugs Act Regulations quoted last week, though mostly favourable to us, are occasionally curious. The "Morning Post" makes a distinction which does not exist, in fact, between a "pure paregoric" that comes within the Regulations and a diluted one that does not, while the "Birmingham Post" thinks the Act "all to the good" because it is "well meant." Alas for the fraility of human nature! Those who "mean well" are frequently those who do most mischief; indeed, to "mean well" has become almost a synonym for ineptitude. The Scottish papers quoted are more to the point. There will undoubtedly be a good deal of "grousing" on account of the extra trouble and expense to which the public will be put by the Act, and some little, too, on account of the retention of prescriptions which is enforced upon us. A man who has paid three guineas for a prescription naturally enough regards it as his own property, and one hardly sees—he certainly won't see in the majority of cases—what right we have to deprive him of it.

A Suggestion

has been made to me which, if it could be adopted, would greatly simplify procedure under the Dangerous Drugs Act Regulations. The most troublesome part of our new duties is the calculation of percentages in prescriptions, but this would not be necessary if all prescriptions containing any quantity of any of the drugs were registered, and there seems no reason why they should not be.

Of course, we are at present helpless in the matter, since registered prescriptions have to be retained, and we have no authority to retain those which, as the Regulations stand, do not require registration, but it should not be difficult to get the Regulations altered in this respect. The alteration proposed should affect prescriptions only. Where other transactions are concerned percentages can be ascertained beforehand at leisure, but it is a serious hindrance, and mistakes are likely to occur, when the calculation has to be done at a busy time, as usually happens with prescriptions. The trouble of registering them would, it seems to me, be very much less.

A Suggestion of an Extra Fee

on prescriptions requiring to be registered under the Dangerous Drugs Act Regulations would, the extra fee being sixpence, sufficiently meet the point of my note on the necessity of increasing our dispensing-charges if the only thing to be considered were the trouble involved in registration, but that is far from being the case. Let this fee be imposed by all means, but there will still remain the fact that we shall dispense fewer prescriptions than hitherto, besides suffering in our purely retail business as a consequence of these Regulations. The fee, moreover, cannot be charged on Insurance prescriptions, and it is highly probable that very few private ones requiring registration will come our way; for, unless I am mistaken, one result of the Regulations will be to increase the practice of dispensing by doctors themselves. Their aim and tendency is to keep the supply of these drugs in the doctor's hands, and this naturally will suggest to the doctor the propriety of "filling" his own prescriptions. Since our business is likely to be thus restricted in both departments an increased charge on all dispensing is the only effectual method of recoupment.

The Very Interesting Advertisements

you cull from the old newspapers sent to you refer for the most part to well-known nostrums, such as Anderson's Scots' Pills, Dr. James's Powder, and Daffy's Elixir, an account of which will be found in Wootton's "Chronicles," and some of which, in a modified form, found their way into our official Pharmacopæia. Others of them are barely mentioned by Wootton, though their formulas have survived in some dispensatories and books of a like kind. Among these may be mentioned Godbold's (not Goldbold's) Vegetable Balsam, which, though it purported to be composed of syrups of forty-two different herbs, was merely an oxymel coloured and perfumed, and Turlington's Balsam, composed of aloes, myrrh, and a number of gums and balsams, dissolved in spirit of wine. Among those not mentioned by Wootton are Fothergill's Tonic Female Pills, composed of aloes, scammony, colocynth, oxide of antimony (in equal parts), and aromatic essences. The British oil, of which Betton's was one variety, was composed of camphor, sweet oil, spirit of wine, and oil of hartshorn, and British herb tobacco was a mixture of three parts of dried leaves of coltsfoot with two parts of thyme, rosemary, betony, eyebright, lavender, and marjoram, one part of hyssop and chamomile, and threeparts of cleavers, all chopped up together. Solomon's Anti-impetiginis was a disguised solution of perchloride of mercury.

THE question of an authoritative retail price list for grocers was introduced at a recent meeting of the Tynemouth Grocers' Federation.

Dangerous Drugs Act Card.—"The Chemist and Druggist has brought out at the price of 1s. a useful wall-card summarising the Regulations of the Act. The front contains in addition notes on the various special authorisations and tables showing the limits of safety dilution for salts of alkaloids. On the back are tables giving the proportion of dangerous drugs in various official and unofficial preparations. Finally, simple prescription calculations are added. The card is intended for the use of chemists, but would be equally useful to any dispensing doctor."—"The Lancet."

"SANITAS" EMBROCATION

SHOULD BE STOCKED BY ALL CHEMISTS.

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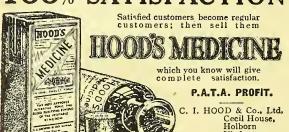
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Editorial Articles

The Dentists Act, 1921

We have received many inquiries as to when the Dental Board mentioned in the Dentists Act will be established, so that our inquirers may apply for admission to the Dentists Register. The Act became law on July 28, and it rests with the General Medical Council to take the first steps to set up the Dental Board by appointing the Dental Registrar, who has to be approved by the

Privy Council. The General Medical Council does not meet until the end of November, so that it is unlikely that the Dental Board will be constituted before the New Year. The text of the Bill was printed in the C. & D., January 1, and the alterations made during its passage through Parliament were very few in number, chiefly, we believe, because the majority of members of Parliament were unaware of the real character of the measure. The congestion of business in the House of Commons at the time was so great that little interest was taken in the Dentists Bill, the subject being one that concerns only a small proportion of the members. The interested members were mainly medical men, who with representatives of Government Departments have quietly established a precedent for an amending Medical Act having for its object the creation of a monopoly of medical practice. The Dentists Act, as we have pointed out on previous occasions, makes a closed profession of the practice of dentistry in the United Kingdom. The "practice of dentistry includes the performance of any such operation and the giving of any such treatment, advice, or attendance as is usually performed or given by dentists, and any person who performs any operation or gives any treatment, advice, or attendance on or to any person as preparatory to or for the purpose of or in connection with the fitting, insertion, or fixing of artificial teeth." The Minister of Health stated that it is not intended to make it an offence under the Act for a parent to extract a child's tooth. With this exception, and the provision in Section 1 that medical practitioners may practise dentistry and that chemists may extract a tooth if the case is urgent and there is no dentist or doctor available, all dental operations will in the near future be the monopoly of persons whose names are contained in the Dentists Register. The concession that chemists may in cases of urgency extract teeth is accompanied by the inhuman provision that general or local anæsthetics must not be used. The objection to the Bill as originally drafted was that chemists practising dentistry who would be eligible for admission to the Dentists Register were to be required to give up their chemists' business if they desired to remain on the Dentists Register. This special penalising of chemists was the fons et origo of the opposition to the Bill which led to the foundation of the Chemists' Dental Society. Through the untiring efforts of this Society the clause containing the unjust provision referred to was withdrawn by the Government, as the opposition which dental chemists were able to exert would have been fatal to the Bill. Many persons have written asking us whether they are eligible for admission to the Register. It may be stated that members of the Chemists' Dental Society and the Incorporated Dental Society will have their claims advanced by the officials of these bodies, and there is every reason to believe that practically all the members of these Societies will be admitted to the Dentists Register in due course. The condition in regard to chemists, which applies equally to those who are not members of the Chemists' Dental Society, is that a chemist shall prove to the satisfaction of the Dental Board that he had, immediately prior to July 28, a substantial practice as a dentist and that his practice included all usual dental operations. If he can do this, he will be treated for the purposes of Section 3 as having been engaged for any five of the seven years immediately preceding July 28 in the practice of dentistry in the British Islands as his principal means of livelihood. The persons who may be admitted to the Register are as follows:

1. A person who for five of the seven years immediately preceding the commencement of the Act (July 28) was

engaged as his principal means of livelihood in the practice of dentistry in the British Islands,

2. A person who was a member of the Incorporated Dental Society before July 28, 1920.

3. A person who for any five of the seven years immediately preceding the commencement of the Act (July 28) was engaged as his principal means of livelihood in the occupation of a dental mechanic and within ten years passes the prescribed examination in dentistry.

4. A person who satisfies the Dental Board that he was, on July 28, engaged as his principal means of livelihood in the practice of dentistry in the British Islands and within two years from July 28 passes the prescribed examination in dentistry is to be treated as having been engaged for five of the seven years immediately preceding the commencement of the Act in the practice of dentistry in the British Islands as his principal means of livelihood.

5. A person who fulfils the condition in regard to chemists given above.

The regulations prescribing the manner in which applications have to be made for admission to the Register have yet to be issued, this being one of the first duties of the Dental Board. It is probable that some regulation will define what is meant by "a substantial practice as a dentist" in the section referring to chemists. There are special provisions as to carrying on the business of dentistry by corporate bodies, and no corporate body may carry on a dental business unless a majority of the directors and all the operating staff are registered dentists. There will be an annual registration fee not exceeding 51 for those persons admitted to the Dentists Register. In regard to the application of the Dentists Act to Ireland, Section 7 (3) states:

For the purpose of Section 6 of the Government of Ireland Act, 1920, this Act shall be deemed to be an Act passed before the appointed day.

The exact meaning of this provision is somewhat obscure, but in a discussion in the House of Commons as to the meaning of the same words in another Bill, the Solicitor-General for Ireland (Mr. T. W. Brown) stated that the object of these words is to preserve to the Northern and Southern Parliaments of Ireland the right to deal with this matter, if they desire, in their respective areas. This was further explained as follows: "This Bill, when passed, will become operative in Ireland, but without my amendment [the addition of the words quoted above] the Parliaments of Northern or Southern Ireland would not be entitled to alter it. With the inclusion of this amendment [the words referred to] the respective Parliaments will be able, if they so desire, to make any alteration that they require." An alteration that will require to be made is in Section 17 (2), which refers to apothecaries in Ireland. According to Section 1 (3) (a), registered medical practitioners may practise dentistry. Irish apothecaries are registered medical practitioners, and yet it is stated in Section 17 (2) that "any reference to a registered chemist and 'druggist shall include a reference . . . to a licentiate apothecary." The references in the Act to chemists are (1) the prohibition of the extraction of teeth except in an emergency and without an anæsthetic, and (2) the provisions for registering chemists who have practised dentistry before the passing of the Act, neither of which enactments seem to apply to Irish apothecaries, because as registered medical practitioners they are entitled to practise dentistry. It should be remembered that the provisions of the Dentists Act were approved by the General Medical Council-the authority in Great Britain for the registration of medical practitioners.

August Overseas Trade

The trade depression from which the country is suffering continues to be reflected in the Board of Trade returns for August, which record large decreases in both imports and exports compared with August last year. The figures are:

August- 1921 £88,581,040	IMPORTS August 1920 £153,343,305	Decrease £64,762,265
August 1921 £51,346,307	EXPORTS August 1920 £114,903,335	Decrease £63,557,028

There are signs, however, that the worst of the slump which followed as a result of the coal stoppage has been passed and that the beginning of a recovery can be recognised, as the August figures are a decided improvement on those of July, when the combined decreases approached 180,000,000l. In that month the coal stoppage, which had lasted since April with disastrous effects on our trade, came to an end. Export values for July were 43,172,400l., against 53,346,300l. last month—an indication of recovery which, however, is now retarded by industrial depression. The largest decrease on the imports side was in raw materials and articles mainly manufactured, which totalled 19,589,000l., against 51,268,500l. in August 1920, a decline of 31,679,500l. Among the largest declines in this section are raw cotton, 7,264,000l.; oil-seeds, oils, nuts, etc., 2,208,000l.; and rubber almost two millions sterling. Articles wholly or mainly manufactured were down by 21,822,000l., the imports for last month being 18,194,000l. against 40,016,000l. for the corresponding period of last year. Chemicals, drugs, dyes and colours fell off to the extent of 2,496,1001., being valued at only 760,8971.; manufactured oils, fats, and resins were lower by 2.202.500l. The decline in chemicals was general, and was pronounced in sodium nitrate, potassium compounds, and painters' colours and materials. The lower importation of food, drink, and tobacco by 11,290,000*l*. resulted from the decline of 10,342,500*l*. in grain and flour and 4,737,800l. in dutiable food and drink, against which are to be set increases of 2,480,297l. in meat and 1,434,000l. in non-dutiable food and drink. The imports also included coal to the value of 593,000l. Almost the whole of the reduction in exports is under the head of articles wholly or mainly manufactured, these accounting for 59,709,8001. of the decrease-figures which need cause no surprise in view of the slump that has taken place in most of our industries. The total of manufactured articles exported for the month was 39,935,000l., compared with 99,645,400l. a year ago. Cotton yarns and manufactures declined by 24,812,000l., woollen goods by almost eight millions, iron and steel goods by over nine millions, and chemicals and the like by 2,043,473l., these reaching a total of 1,171,241l. The drug and medicine section was unsatisfactory, only 152,170l. worth being exported, against 409,000l. in August a year ago, when the boom had not yet spent itself. Of the scheduled items, sodium compounds were the hardest hit, only 251,486 cwt. being exported, against 800,000 cwt. a year ago. Coal-tar products exhibit the least falling off, being valued at 139,000l., against 170,000l. a year ago, but the figures were only maintained by large exports of tar oil and creosote, as all the other enumerated items show a decided decline. Compared with July it looks as if our overseas trade has reached and passed the turningpoint, although under present conditions the recovery cannot be but slow.

Medicine as a Science

MEDICAL orators are so used to lauding the advances of medical science and deploring the failure of pharmacy to keep pace with the advances in the methods of modern medication that a communication from Dr. W. Rogers Williams, Clevedon, in "The British Medical Journal" is interesting as giving the other side of the question. Dr. Williams scoffs at the idea of medicine being regarded as a science, and declares that having been "more professed than laboured" for so many centuries medicine is still in its infancy. He regards the history of medicine as the most striking example of the strange way in which fact and fancy may become so interwoven as to be indistinguishable. Medicine, he declares, was the outcome of the three great Utopias of the ancient world: magic, alchemy, and astrology, and originated in Egypt, where the medical art was as old as Pan-and as promiscuous. The Greeks merely developed what they learnt from the Egyptians. This so-called science arose under the ægis of the priests in a witches' cauldron of superstition and religiosity. Magic was its chief ingredient, with officiating priests as Hecate, and there were elaborate rites and ceremonies, mysteries, penitential supplications, and offerings. "Such is the brew," continues Dr. Williams, "of which the medical art was compounded, and, since such natal influences can never be entirely got rid of, we need not be surprised at some of its modern vagaries; and that it still remains a highly conjectural art notwithstanding the efforts of science to extricate it from its ancient thraldom." Almost the only generalised conception as to the nature of disease attained by the ancients was the obsession as to maladies being caused by an evil spirit possessing the affected individual. This evil spirit, as in the Miracle of the Swine, had to be driven out, or conciliated, to effect a cure. The modern doctors, says Dr. Williams, have got rid of this obsession without having acquired any generalised conceptions in its place. Medical lore consists largely of a mass of details unconnected by scientific links with the general chain of science. The medical mental outlook is confused, and there is lack of light and leading, and consequently of progress. "The unbridled empiricism of our age differs from that of antiquity in direction rather than in essence" is another dictum, and the doctor concludes "it is a danger to the practice of medicine when science and its teachings are but little considered or disregarded; for, under such circumstances, knowledge of the art is apt to become inferior to that of the trade.' It is consoling to pharmaceutical feelings to find an experienced practitioner possessing the "blue ribbon" of surgery, the F.R.C.S. England, writing in this vein, as the medical writer is apt to dilate on the scientific glories of medicine and the high attainments of its disciples, while flinging cheap jibes at the practitioners of the mere "art" of pharmacy. Statements as to the failure of pharmacists to keep abreast with the advances in methods of modern medication lose their sting when we learn that "empiricism is unbridled." No one who has experience of the modern panel doctor and his ways will deny the accuracy of the above statements. To call the general practitioner, or even the so-called specialist, a "scientist" is a misnomer. The surgeon is a skilled craftsman like the pharmacist, but the average general practitioner is an empiricist. Science has done its best to extricate medicine from its ancient thraldom, but it still savours of the magic and mysteries from which it sprung.

Dangerous Drugs Act

Orders and Authorities

THE various Orders and Authorities issued by the Home Secretary and printed in the C. & D., August 27, p. 58, are now obtainable from the Stationery Office, Kingsway, London, W.C., at 1d. each, postage extra.

D.D.A. Card for Prescribers

In response to requests from our subscribers we are preparing a Dangerous Drugs Act card for prescribers. The purpose of the card will be to supply medical men with information in a concise form regarding the Dangerous Drugs Act Regulations, so that they will know creatly what formalities are proceed when prescribing exactly what formalities are needed when prescribing "dangerous" drugs. The information will be supplemented by useful aids to prescribers, such as limits of dilution and references to exempted preparations. The card will be a small one, somewhat larger than a post-card, so that medical men can carry a copy in the pocket or place it in the consulting-room for easy reference. We intend selling the cards at a cheap rate so that chemists, either independently or through local associations or phareither independently or through local associations or pharmaceutical, committees, can purchase the cards for free distribution to local doctors. We believe that the card will not only assist medical men to acquire a knowledge of the Regulations governing the supply of "dangerous" drugs, but that it will facilitate chemists' dispensing by doing away with informal prescriptions. We hope to make a further announcement as to the price of the cards next week next week.

Corrected Table

To replace that given in "C. & D.," September 3, p. 47. WEIGHT/WEIGHT IN GRAINS OR PARTS THEREOF in 1,000 to 1 in 100 or 0.1 to 1 per cent.

1 III 1,000 to 1 III 200 to 1												
Per cent.	1 lb.	½ lb.	4 oz.	1 oz.	å oz.	½ oz.	1 oz.	40 gr.	30 gr.	20 gr.	5 g r.	gr.
0.1	7	31	13	7 T 6	21 64	- 3 2	-7 6 €	1 25	1 34	<u>រ</u> 5ប	200	1000
0.2	14	7	31/2	78	2 <u>1</u>	7 16	7 32	25	3 50	1 25	100	<u> </u>
0.3	21	101	51	15	63 64	$\frac{21}{32}$	- 21 64	67	<u>6</u> 7	67	<u>1</u> 67	333
0.4	28	14	7	134	21 16	7 8	7 16	25	25	2 25	50	250
0.2	35	17½	83	218	184	132	3 <u>5</u>	1 5	$\frac{3}{20}$	10	1/40	200
0.6	42	21	101	25	131	156	21/32	39	1 ² 3	39	3 g	T = 3
0.7	49	241	121	37	219	1172	49 64	8 29	6 29	29	29	1 ¹ / ₄ 3
0.8	56	28	14	31/2	25	13	7 8	25 25	25 25	2 g	25	123
0.9	63	31½	15%	315	251	131	63 64	8 23	6 23	23	23	TIT
1.0	70 :	35	17½	43	332	218	132	95	3 10	1/5	1 20	100

Where the last figure is not divisible evenly the next downward is taken.

.The object of this table is to represent the actual percentages w/w in any quantity specified. It is published for the benefit of those people who imagine that our "safety limits" are wrong becarse they do not harmonise with the absolute limits. We intentionally set out to devise "safety limits," but the table given above lays down the actual legal limits where the percentages 0.1 and down the actual legal limits where the percentages 0.1 and 0.2 for the alkaloids are concerned. Whatever anyone sells must be below those figures if it is desired to be outside the Dangerous Drugs Act. Any preparation containing the quantities shown is subject to the D.D.A. Regulations. the quantities shown is subject to the D.D.A. Regulations. The only reservation is that morphine salts would be safe on the line "0.2 per cent." and morphine anhydrous on line "0.1 per cent.," as would also the salts of cocaine and diamorphine. The table is in contradistinction to the "safety limit," and serves as a guide in the ordinary transactions for any quantity where marking is obligatory. A further use of the table is in making up formulas. Given the amount of the "dangerous" drug in any quantity from 1 gr. to 1 lb. (and higher by simple

multiplication), a reference to the table shows at a glance the nearest percentage and what action should be taken in selling, labelling, or otherwise. It serves also as a reference when, having found the quantity of "dangerous" drug in a preparation, it is advisable to satisfy oneself that the limits of the Dangerous Drugs Act have not been exceeded.

League of Nations Inquiry

WE mentioned in the C. & D., I., 1921, p. 637, that the League of Nations Opium Committee had arranged to look into the question of the feasibility of prohibiting the growth of opium everywhere except for medicinal and scientific purposes. In this connection the Home Office is sending out the following letter, signed by Sir Malcolm Delevingne, to opium merchants:

I am directed by the Secretary of State to say that he has been asked by the Council of the League of Nations, who are entrusted by the Treaties of Peace with the supervision of the execution of the International Opium Convention, of the execution of the international Opium Convention, 1912, to furnish information as to the production, consumption, and export of "medicinal opium" in this country during 1920 and each other preceding ten years, or if that is not possible, during 1919, 1920, and the last year before the war for which figures are available.

"Medicinal opium" is defined in the Convention to mean raw opium which has been heated to 60° C. and contains not less than 10 per cent. of morphine, whether or not it

powdered or granulated or mixed with indifferent

If raw opium is or has been treated by you in this way so as to produce "medicinal opium" within the meaning of the Convention, the Secretary of State would be obliged if you will furnish him as soon as possible with particulars of your production in each of the years mentioned. If you are able to say how much of your production was destined for home consumption and how much for export, this information will be useful.

"All Fours" Formulas

In response to the request (C. & D., September 10, p. 58) for suggestions for formulas for "All Fours" which would allow of the preparation to be sold retail without a doctor's prescription, we have received the following among other replies:

F. W. B. (12/9) suggests as follows:

Tr. camph. co.

Tr. opii

Ol. anisi,
Ol. menth. pip. 388. ... aa. mxx. Aq. ad

Aq. ad 3ss.
Sixteen times makes an 8-oz. bottle, of which ziij. can be sold for 4d., and is outside the Dangerous Drugs Act.

Mr. J. W. Wood, Ashton-under-Lyne, writes: I suggest the following for an "all fours" mixture which is quite clear of the Dangerous Drugs Act:

Ol. menth. pip., Ol. anisi, Tr. opii ... Tr. opii aa. 3iv. Tr. camph. co. 3iv.

This makes a total quantity of 5½ oz., and contains 0.127 per cent. of morphine, as the following calculations show:

1 per cent. tr. opii=4.375 grains in 3j.

0.05 per cent. tr. camph. co. =0.21875 grains in 3j.

5iv. tr. opii contains 2.1875 grains in 5j.

5iv. tr. opii contains 2.1875 grains

5iv. tr. camph. co. contains ... 0.875 grains

Total morphine in mixture ... 3.0625 grains

5vss.=(437.5 × 5.5)=2406.25 grains; 2406.25:100::3.0625: x

or 0.1272 per cent.

SPIRIT TAX IN NIGERIA.—The import duty on perfumed or medicinal spirits was increased to 35s, per gallon as from August 24.

Post-office Methods.—A correspondent (7/9) in one of the royal burghs of Scotland sends us a quaint story of an inquiry made at a local post office concerning a surcharge of a penny exacted from a London wholesaler to whom our correspondent had sent an order. Not only was the error in making a surcharge admitted, but the penny was also returned by the messenger who took the inquiry. On it being pointed out that the sum should have been repaid to the London wholesaler, the reply was that it could be sent to the rightful owner "next time you write."

The British Association for the Advancement of Science

THE Presidential address of Sir T. Edward Thorpe, C.B., F.R.S., delivered at the Edinburgh meeting of the British Association was summarised last week (C. & D., September 10, p. 45). We deal now with other addresses and papers which came before the Association.

The Importance of Vitamins

"Vitamins in Relation to Public Health" formed the subject of an address to the Physiological Section by Dr. J. C. Drummond. It was frequently argued, he said, that the peoples of Western Europe need not fear the results of an inadequate supply of vitamins, because their dietary is normally so varied that the deficiency of one foodstuff could be made up by another. At first sight this appears true, but closer examination shows that it may lead to a false sense of security. Vitamins are required both by growing children and adults, and proportionately more by growing children. Another fundamental point is that vitamins are derived, directly or indirectly, only from plant tissues; green vegetables, dairy produce, and fruits are the best sources of these substances. The staple dietary of the masses of the people in our large towns consists of white bread, cheap margarine, potatoes, a little meat, and condensed milk. The whole tendency of modern food production is in the direction of the artificial, and this is fundamentally wrong. The drying of vegetables, the subjection of a delicately constituted fluid such as milk to drastic processes of one type or another could not be a step in the right direction. That they are to a large extent necessary may be true; but we should not lose sight of the necessity for counteracting the possible effects of this gradual transition to purely artificial food supplies. A far-reaching extension of allotments is one of the methods by which the evils arising from the lack of vitamins might be counteracted.

Giganticism

Professor W. D. Halliburton, before the Physiology Section, gave some interesting facts about giants. The popular idea of a giant, he said, is that he is a powerful and magnificent specimen of mankind, who often used his power to the detriment of mankind. As a matter of fact, the real giant-not the legendary one-is just the reverse, and if they remember some of the nursery legends they would see that even that element of truth is contained in them, for Jack, the celebrated Giant is contained in them, for Jack, the celebrated Giant Killer, was able, by the most simple wiles, to overcome his giant adversaries. Generally speaking, the giant is a very feeble person, usually destitute of those features which are associated with masculinity. To put it into a word, "giganticism" is a form of disease, the result of over-activity of the pituitary gland, a small ductless body about as big as a cherry stone, which hangs by a kind of stalk from the lower lobe of the brain. This ever activity is present from highly having the over-activity is present from birth upwards, during the time the individual grows. It sometimes happened that over-activity of the gland comes into play after the normal growth has finished, when an increase in height is no longer possible; in those cases the hands and feet became enlarged, the back bowed, the chest unduly widened, and the head and features misshapen. People suffering from that particular form of "giganticism first discover that something is wrong from the fact that they have to get larger boots or gloves, as the disease usually shows itself first in the extremities. The hobgoblin is probably a pictorial representation of this particular form of giganticism in olden times.

The Structure of Molecules

At a joint discussion of the Chemistry and Mathematical Sections, Dr. Irving Langmuir, of New York, who has in recent years advanced new theories with regard to molecular structure, further propounded his investigations. He explained that one of the chief aims of chemistry for over half a century has been to obtain a knowledge of molecular structure. He has worked on

the basis of Thompson, Darwin, Lewis, and others, with whose fundamental details of the structure of atoms all could agree; but when it comes to the question of what electrons are doing there is great disagreement. They know certain things from certain lines of evidence, but from certain other lines of evidence they seem to be able to deduce the contrary. For the purpose of chemical evidence they do not need to know whether electrons are moving or not; the important thing from the chemical point of view is the number of electrons that exist in different layers, the number in each of the shells, and the number held between two atoms. The accumulated knowledge acquired by the chemist has largely been summarised by his theories of valency. Recently, based upon the discovery of the electron and the theory of the nuclear atom, those theories have developed, until they offer more powerful methods of attack on the problem of molecular structure than any of the standard chemical methods. Scientists have begun to know something of the arrangement of the electrons in the molecules, and it must be realised that the new knowledge will profoundly affect their interpretation of chemical phenomena. fundamental question whether an electron is moving or stationary would no doubt be discussed for many years, but in the meantime Dr. Langmuir is absolutely convinced that they rotate.

The Dye Industry

Professor H. E. Fierz, of the Zurich University, gave before the Chemistry Section an account of the modern dye-making industry. The dyestuffs industry should now be called modern organic technology, for it has gone far beyond its original function of manufacturing dyestuffs. Before the war the total value of the industry was not more than 20,000,000/, compared with 120,000,000/. for cotton, 240,000,000/. for wool, and 500,000,000/. for cereals. Germany controlled 95 per cent. of the dye-making industry, but the total capital invested was only ten millions, the output thus being 200 per cent. on the capital. During and since the war many other countries had come into the industry, and the total capital is now about forty millions. The consumption cannot be forced, and there is now an output of only 50 per cent. of the capital value. The actual profit, 15 per cent. before the war, never exceeds 5 per cent. now. In many cases the overhead costs greatly exceed the market value of the products. If the industry is to be saved without completely sacrificing the capital, many changes must be made. The quality and standard must be greatly improved, especially by research work. Chemically pure products are usually much more fast, especially in dyeing cotton fabrics. Indigo is still the prince of dyestuffs, but synthetic indigo could equal it if made-sufficiently pure. New and valuable substances are often obtained in the process of getting absolute purity. The industry is also turning more and more to the manufacture of photographic and pharmaceutical products, and it is found that some of the synthetic dyes akin to that used in typewriting ribbons are a specific against the spirochætæ of syphilis, although not poisonous to the human body. The value of non-dyestuffs now produced by the industry is twice as much as the value of the dyes, and is continually increasing.

X-rays as Light

Professor O. W. Richardson, F.R.S., in his Presidential address before the Mathematics and Physics Section dealt with the problems of physics. After a reference to a discussion in 1915 on the thermionic emission (the emission of electrons and ions by incandescent bodies), he stated that the photo-electric effect of the whole spectrum is far too small to account for thermionic emission, and at present the subject is a field for speculation. Contact electricity and photo-electric action were considered, and the lecturer concluded with an interesting summary of the relation of light and x-rays. He said one of the great achievements of experimental physics in recent years has been the demonstration of the essential unity of x-rays and ordinary light. X-rays have been shown to be merely light of particularly high frequency or short wave-length, the distinction between the two

being one of degree rather than of kind. The foundations of our knowledge of x-ray phenomena were laid by Barkla, but the discovery and development of the crystal diffraction methods by Laue, the Braggs, Moseley, Duane, and de Broglie have established their relations with ordiand de Broglie nave established their relations with ordinary light so clearly that he who runs may read their substantial identity. The actual gap in the spectrum of the known radiations between light and x-rays is also rapidly disappearing. The longest stride into the region beyond the ultra-violet was made by Lyman with the vacuum grating spectroscope which he developed. For a short time Professor Bazzoni and the lecturer held the record in this direction with their determination of the record in this direction with their determination of the short wave limit of the helium spectrum, which is in the neighbourhood of 450 Ångstrom units. More recently this has been passed by Millikan, who has mapped a number of lines extending to about 200 Ångstrom units that is to say, more than four octaves above the violet limit of the visible spectrum. The lecturer was not sure what is the longest x-ray which has been measured, but he finds a record of a zinc l-ray by Friman of a wave-length of 12.346 Angstrom units. There is thus at most a matter of about four octaves still to be explored. In approaching this unknown region from the violet end the most characteristic property of the radiations appears to be their intense absorption by practically every kind of matter. This result is not very surprising from the quantum standpoint. The quantum of these radiations is in excess of that which corresponds to the ionising potential of every known molecule, but it is of the same order of magnitude. Furthermore, it is large enough to reach not only the most superficial, but also a number of the deeper-seated electrons of the atoms. There is evidence, both theoretical and experimental, that the photoelectric absorption of radiation is most intense when its quantum absorbing electron but does not exceed it too much. In the simplest theoretical case the absorption is zero for radiations whose frequencies lie below the minimum quantum, rises to a maximum for a frequency comparable with the minimum, and falls off to zero again at infinite with the minimum, and falls oil to zero again at infinite frequency. This case has not been realised in practice, but, broadly judged, the experiental data are in harmony with it. On these general grounds we should expect intense absorption by all kinds of matter for the radiation between the ultra-violet and the x-ray region. The closeness of the similarity in the properties of x-rays and light is greatly and the x-ray region. light is even yet inadequately realised. It is not merely a similarity along broad lines, but it extends to a remarkable degree of detail. It is perhaps most conspicuous in the domains of photoelectric action and of the inverse phenomenon of the excitation of radiation or spectral lines by electron impacts. While there may still be room for doubt as to the precise interpretation of some of the experimental data, the impression the lecturer has formed is that each important advance tends to unify rather than to disintegrate these two important groups of phenomena.

Nature's Chemical Laboratory

The Presidential address by Dr. M. O. Forster, F.R.S., before the Chemical Section was entitled "The Laboratory of the Living Organism," and dealt with the chemical wonders effected by Nature. The chemist cannot produce starch as Nature does it in a vast chemical synthesis.

VEGETABLE ALKALOIDS Side by side with starch, silent chemical agencies elaborate molecules even more imposing, in which nitrogen is interwoven with the elements of starch, and thus are produced the vegetable alkaloids. In this province the chemist has been more fortunate, and successive genera-tions of students have been instructed in the synthesis of piperine, coniine, trigonelline, nicotine, and extensions from the artificial production of tropine; but until quite recently his methods have been hopelessly divergent from those of the plant. Robinson, four years ago, effected a remarkably simple synthesis of tropinone by the mere association of succindialdehyde, methylamine, and acetone in water, unassisted by a condensing agent or an increase of temperature. Although the yield was very

small, it reached 42 per cent. when acetone was replaced by a salt of its dicarboxylic acid, which might easily arise from citric acid as one of the intermediate compounds used by plants in their synthetical exercises. Based upon this experiment, Robinson has developed an attractive explanation of the phytochemical synthesis of alkaloids, in which the genesis of a pyrrolidine, piperidine, quinunuclidine, or iso-quinoline group is shown to be capable of proceeding from the association and interaction of an amino-acid, formaldehyde, acetonedicarboxylic acid and the intermediate products of these, taking place under the influence of oxidation, reduction, and condensation such as the plant effects. Ornithine ($\alpha\delta$ -diaminovaleric acid) is represented as the basis of hygrine, cuschygrine, and the tropine alkaloids, while the conine group may spring from lysine ($\alpha\epsilon$ -diaminocaproic acid). A particularly interesting representation of these particular policy is a supersequent of the second particular par larly interesting application of these principles has been made with reference to the vital synthesis of harmine, which Perkin and Robinson (1919) represent as arising from a hydroxytryptophan as yet undiscovered; meanwhile they have shown that harman is identical with the base obtained by Hopkins and Cole on oxidising tryptophan itself with ferric chloride.

THE NUCLEIC ACIDS

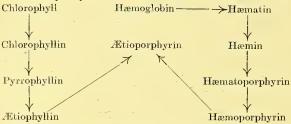
Owing to the venerable position occupied by alkaloids in the systematic development of chemical science, and to the success which has attended elucidation of their structure, many of us have become callous to the perpetual mystery of their elaboration. Those who seek fresh wonders, however, need only turn to the nucleic called in order to extinct their elaboration. acids in order to satisfy their curiosity. For in the nucleic acid of yeast the chemist finds a definite entity For in the forming a landmark in the path of metabolic procedure, a connecting link between the undefined molecules of living protein and the crystallisable products of katabolic disintegration. With an empirical formula, $C_{38}H_{49}O_{29}N_{15}P_4$, it has a molecular weight (1303) exceeding that of the octadecapeptide (1213) synthesised by Fischer (1907), although considerably below those of by Fischer (1907), although considerably below those of the penta-(penta-acetyl-m-digalloyl)-\(\theta\)-glucose (2136) pro-duced by Fischer and Bergmann (1918), and of the hepta-(tribenzoylgalloyl)-\(\theta\)-iodophenylmaltosazone (4021) elabo-rated by Fischer and Freudenberg (1912). Nevertheless, its intrinsic importance is transcendent. In the language of chemistry it is, a combination of four nucleotides, linked with one another through the pentose molecule, d-ribose, which is common to each, and owing its acid character to phosphoric acid, also common to the component nucleotides. The latter differ from one another in respect of their nitrogenous factors, which are guanine (2-amino-6-oxypurine), adenine (6-aminopurine), uracil (2:6-dioxypyrimidine), and cytosine (2-oxy-6-aminopyrimidine), giving their names to the four nucleotides linked with each other in the following manner:

CHLOROPHYLL AND HÆMOGLOBIN

The relationship between chlorophyll, upon which green plants depend, and hæmoglobin, which performs the chemical duties of the blood of animals, was next dealt The elucidation of chlorophyll structure in its later stages is due principally to Willstätter and his collaborators, whose investigations culminated in 1913. Eliminating yellow and colourless companions of chlorophyll by a regulated system of partition among solvents, they raised the chlorophyll content to 70 per cent. from 8 to 16 per cent. found in the original extract, completing the separation by utilising the insolubility of chlorophyll in petroleum ether. By such means 1 kilo of dried stinging-nettles gave 6.5 grams of the purified material, representing about 80 per cent. of the total amount which the leaf contains, and application of the process to fresh leaves has established the identity of the product from both sources. Thus the isolation of chlorophyll from plants is now no more difficult than that of alkaloids or of sugars.

As a consequence of these operations the dual nature of leaf-green was brought to light in 1912. The focus of main phytochemical action is thus revealed as a system composed of chlorophyll-a, bluish-green in solution, and of the yellowish-green chlorophyll-b, representing different stages of oxidation as indicated by the formulas:

(a) $C_{32}H_{30}ON_4Mg(CO_2.CH_3)$ ($CO_2.C_{20}H_{39}$)= $C_{55}H_{72}O_5N_4Mg$ (b) $C_{32}H_{28}O_2N_4Mg(CO_2.CH_3)$ ($CO_2.C_{20}H_{39}$)= $C_{55}H_{70}O_6N_4Mg$ In the solid form these products are micro-crystalline powders, bluish-black and greenish-black respectively. They are accompanied by two non-nitrogenous yellow pigments, the unsaturated hydrocarbon, carrotene, $C_{40}H_{56}$, and its oxide, xanthophyll, $C_{40}H_{56}O$, both of which readily absorb oxygen and are allied to a third carrotinoid substance, fucoxanthin, $C_{40}H_{56}O_6$, associated with them in brown algæ and isolated in 1914. Based upon the experience indicated above, Willstätter and his colleagues have examined upwards of two hundred plants drawn from numerous classes of cryptogams and phanerogams. The leaf-green of these is identical, and the proportion of a to b almost invariably approaches 3:1 excepting in the brown algæ, in which b is scarcely recognisable. Further details were given of the course of the investigation establishing the knowledge that ætioporphyrin $(C_{31}N_{36}N_4)$, a crystalline base obtained from chlorophyll, is the basic principle also of the blood-pigment in which iron plays the part of magnesium in chlorophyll. The relationship may be sketched as follows:



The lecturer then dealt with the anthocyans and the recent researches of Wildstätter, Everest, and others. Pelargonidin, cyanidin, and delphinidin are the fundamental materials in the group of anthocyan pigments, and they are derived from the three flavonols, kaempferol, quercitin, and myricetin, respectively. The variations upon these types which present themselves in blossoms are twofold, due to (1) the number and position of entrant methyl groups, and (2) the number and character of the aldose molecules which go to form their glucosides. Belonging to the first group are peonidin (monomethylated cyanidin), ampelopsidin, myrtillidin, and petunidin (unonomethylated delphinidin) with malvidin and oenidin (dimethylated delphinidin). The second group arise from combination with glucose, galactose or rhamnose, the greatest proportion of pigments occurring as mono- or diglucosides. Thus callistephin and salvinin are the mono- and diglucoside of pelargonidin; asterin and chrysanthemin are monoglucosides, and idaein a galactoside of cyanidin, derived from which are the diglucosides cyanin and mekocyanin, and the rhamnoglucoside, keracyanin; violanin is a rhamnoglucoside of delphinidin, while delphinin, when hydrolysed with hydrochloric acid, yields delphinidin chloride, glucose, and p-hydroxy-benzoic acid in the molecular proportion 1:2:2.

Micro-biochemistry and photosynthesis were other matters dealt with in this address, and the lecturer concluded by urging that a sufficiency of chemical, physical, mechanical, and biological principles should be brought into the general scheme of secondary education to render every boy and girl of sixteen possessing average intelligence at least accessible to an explanation of modern discoveries.

South African News

(From "C. & D." Correspondents.)

"The Chemist and Druggist" is supplied weekly to members of all the Chemists' Societies in South Africa

Transvaal

Mr. Ernest L. Ralling, who has been elected President of the Transvaal Pharmaceutical Society, was born at Colchester, Essex, in 1863, and served his apprenticeship with Mr. F. A. Cole, of that town. He passed the Minor examination in 1885 from Muter's. Coming out to South Africa in 1892, he started business on his own account in Kloof Street, Capetown, in 1898, and he opened his present business in the Carlton Hotel Buildings, Commissioner Street, Johannesburg, in 1905. He is a regular worker in the interests of the Pharmaceutical Society, and this is his second term as President, he having held that office in 1912-13. An account of Mr. Ralling's career would be incomplete without mentioning that he takes a keen interest in Freemasonry, being a Past Master of the Goede Hoop Lodge of Capetown. It may also be mentioned that several of Mr. Ralling's brothers share with him this interest, his eldest brother especially, having created something like a Masonic record, as he has lately been invested as secretary of his Lodge in England for the fiftieth time, a truly unique occurrence.

Masonic Items.—Mr. E. O'Brien, the secretary of the Transvaal Pharmaceutical Society, has lately been installed as Master of the Fairview Masonic Lodge, No. 3010 E.C., the ceremony being performed by the District Grand Master of the Transvaal, in the presence of fifty Past Masters and 100 brethren. This is Mr. O'Brien's second term as the Master of a Lodge, he having occupied the chair of the Stellenbosch Lodge in 1907.—Still another pharmaceutical Freemason—or should we say Masonic pharmacist?—in the person of Mr. G. B. Christie, was installed in the chair of the Gordon Lodge, No. 847 S.C., on August 17, 1921, in the presence of a very large number of distinguished Masons. Mr. Christie is also a member of the committee of the Pharmaceutical Society.—Other Masonic pharmacists who have achieved the dignity of Masters in the Craft are Mr. J. M. Braes, who has just vacated the chair of the Erin Lodge, No. 364 I.C., and Mr. H. M. Hetherington, who is a Past Master of the Commonwealth Lodge. Many other well-known pharmacists are members of the Galen Lodge?

The Pharmaceutical Society of the Transvaal

The annual general meeting was held on July 28, 1921, in the Grand National Hotel. There was an attendance of about forty members, among whom were Messrs. R. Q. Leeds, J. Christie, M.L.A., E. L. Ralling, A. Macdonald, L. Thomas, R. Macintosh, A. Rennie, J. M. Braes, all past Presidents of the Society; Messrs. G. Christie, R. Hamilton, J. S. Ferguson, J.P., J. E. Blair, J. O. Thomson (members of committee), E. O'Brien (secretary), and Alex. Anderson (secretary of the Transvaal branch of the P.A.T.A.). Mr. R. Macintosh, the retiring President, in proposing the adoption of the annual report and balance sheet, said that it was a matter of great regret that the Pharmacy Bill had not yet become law, and appealed to Mr. J. Christie, M.L.A.—who was present—to do his best to assist its passage through the House of Parliament. In answer to this appeal Mr. Christie informed the members present that he had mentioned the matter to the Minister of Public Health, and had that gentleman's assurance that the measure was receiving his most earnest consideration. The following members were elected to office for the ensuing year: President, Mr. Ernest L. Ralling; Vice-President, Mr. J. S. Ferguson; Committee, Messrs. R. Macintosh, R. Q. Leeds, R. Hamilton, G. B. Christie, W. Proudfoot, W. T. Keating, A. Rennie, J. E. Blair, and C. Young; Secretary and Treasurer, Mr. E. O'Brien. A hearty vote of thanks was tendered to Mr. R. Macintosh, the retiring President, who had occupied that position for two years.

Trade Report

manufacturers for bulk quantities or original packages. To these prices various charges bave to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling and the like. Qualities of chemicals, drugs, oils, and many other commodities vary greatly, and higher prices than those bers quoted are charged for selected qualities of natural products even in bulk quantities. bulk quantities.

42 Cannon Street, E.C. 4, September 14.

This report closed for press a day earlier than usual this week owing to circumstances over which we have no control. It reflects the position of the various markets up to Tuesday evening. Few changes, however, have occurred in the interval, market business continuing slow. Senega is held for higher prices, and if credence can be given to reports from N.W. Canada little has been dug this season. Agar-agar remains firm on the spot; ergot is dudl of sale, with further arrivals; asafetida is steady. Refined camphor and menthol continue slow. Lagos palm and linseed oils are dearer. Chinese wood oil is cheaper.

Higher	Firmer	Easier	Lower
Acetic acid Benzol Linseed oil Linseed oil Palm oil (Lagos) Piperagine Salicylic acid Senega Sodium prussiate Sodium salicylate Toluol	Arrowroot Hexamine Methyl salicylate Oxalic acid Paraldehyde Potash bromide Salol Wormseed oil	Cedarwood oil Cream of tartar Elemi Gualacol carb. Hydroquinone Lemon oil Maize starch powder Patchouli oil Sodium nitrite Spearmint oil	Antimony (crude) Barbitone Peppers Wood oil (Ch.)

Cablegram

NEW YORK, September 13.—Business is fair. Peppermint oil in tins is cheaper at \$1.90 per lb. Curação aloes is lower at 7c., and jalap has been reduced to 18c. per lb.

Crude Drugs, etc.

AGAR-AGAR is firm, sellers of No. 1 Kobe strip asking 3s. per lb., and to arrive 2s. 9d. to 2s. 10d. per lb. c.i.f. is quoted from second-hand sellers.

ANTIMONY.—The feature is the further weakening tendency of crude, for which probably not more than 15l. 10s. c.i.f. U.K. could be secured in the present decidedly neglected state of the market. Foreign regulus is nominally 24l. 10s. to 25l. to arrive c.i.f.

ASAFETIDA is steady, with good qualities offering at from 10l. to 14l. per cwt.

BALSAM PERU is about steady on the spot at 7s. 9d. per 1b. Much higher prices are quoted to come forward, 9s. c.i.f. in some cases.

CALUMBA.—The London stock at the end of August was 20,105 bags, against 20,050 bags in August 1920. The landings in August were nil and the deliveries 58 bags.

CAMPHOR (REFINED) remains quiet, Japanese $2\frac{1}{2}$ -lb. slabs offering at 4s. per lb. on the spot and at 3s. 10d. c.i.f. for September-October shipment; Chinese on the spot is 3s. 11d. per lb. and 3s. 9d. c.i.f.

CASCARÁ SAGRADA.—The London stock at the end of August stood at 51 tons, against 77 tons in August 1920;

the landings were nil and the deliveries one ton.

Chamomiles.—Owing to the lack of supplies on the London market and no forward offers from Belgium at the moment, prices are difficult to quote. Good new crop has been sold at from 235s. to 240s. on the spot, and these figures are nominal. Three or four year old is obtainable at 130s., and last year's at about 160s. As a result of the scarcity this season it has been the practice on the part of some growers to mix a certain proportion of the best

of the 1920 crop with the 1921 crop.

CINCHONA.—The auction to be held at Amsterdam on September 28 will consist of 1,745 packages Java manufacturing bark, weighing about 101,258 kilos.

COCOA BUTTER.—Prime English is quoted at 1s. 10d.

per lb. in not less than one-ton lots.

ELEMI has been selling privately at about 75s. per cwt. for fair pale.

Ergor is dull of sale, spot offering at from 6s. to 6s. 6d. per lb., and to arrive 5s. 3d. c.i.f. is quoted for Portuguese; 40 cases have arrived this week, also 20 bags, both from Lisbon.

GAMBOGE.—The London stock at the end of August stood at 31 packages, against 37 in August 1920; the landings were nil and the deliveries 5. 35l. per cwt. will buy good Siam pipe.

GLUCOSE is offering at 29s. 3d. per cwt., duty paid landed terms, for guaranteed water white for September-October delivery.

GUM ACACIA is quiet, with usual Kordofan sorts offering at 50s. and cleaned at 52s. 6d.; good white offer at 105s. and fine pale at 137s. 6d. per cwt.

HEN YOLK is quiet, with Chinese prime liquid offering at 115s. per cwt. on the spot and at 95s. c.i.f. for September-November shipment. Dried yolk is $3\frac{1}{2}d$, sprayed whole egg 8d., and native dried whole $4\frac{1}{2}d$ per lb. on the spot. Prime albumen is 3s. spot and 2s. 10d. c.i.f. for September-November shipment.

Honey.—Australian has been in better demand of late, and values have advanced to 30s. per cwt. Old crop pale set Jamaica can be had at 45s. and fair Cuban at 45s. per cwt.

IPECACUANHA.—The London stock at end of August consisted of 736 packages Matto Grosso, 8 Minas, 2 Cartagena, and 69 East Indian, a total of 815 packages, against 683 packages in August 1920. The landings during August were 160 Matto Grosso and 6 Cartagena, the deliveries being 9 Matto Grosso, 9 Cartagena, and 7 East Indian.

Menthol is slow of sale, with sellers quoting Kobayashi-Suzuki at 22s. 6d. per lb. and September-October shipment at 19s. c.i.f.

MERCURY.—The fact deserves notice that our imports last month were practically nil; or, to be exact, returns represent barely 1½ bottles. The total for eight months amounts to 20,613 bottles, compared with 27,206 bottles and 42,019 bottles for the same period in 1920 and 1913 bottles were re-exported, which is very small compared with former years. The returns of exports are, as a matter of fact, much below the normal of pre-war times. The demand has remained exceedingly dull, with the leading interests still quoting 10l. 10s. per bottle, but quotations vary very considerably on either side of 10l. 5s. down to about 10l. to 9l. 15s. Export business is virtually at a standstill.

MYRRH.—The London stock at the end of August was 754 packages, against 589 in August 1920; the deliveries were 19 and the landings 34 in August. Pale Aden sorts are quoted at 12l. down to 6l. per cwt. for glassy and mixed Somali.

OPIUM.—The British Chamber of Commerce of Turkey and the Balkan States, in its August issue of the Journal, states that the opium market has been very quiet over the last month and prices have fallen somewhat. Druggists' can be bought at from 750 to 800 piastres. There have been few buyers, and arrivals have been considerably higher than those of the previous months, owing to some 30 cases from Salonica. having been sold on the mar-There has been a small demand from the Continent, but advices from the United Kingdom are to the effect that the opium business is gradually being killed by Government restrictions.

SENEGA.—With a temporary scarcity on the spot and difficulty in obtaining offers from U.S., sales of a fair quantity have been made at 4s. 2d. to 4s. 3d., but 4s. 6d. is now asked. Reports from large dealers in Winnipeg indicate that very little has been doing so far this season, and, judging by the paucity of offers from the North-West, it looks as if the crop will prove small.

SHELLAC has been quiet throughout, the spot value of the usual standard TN Orange quality being from 305s. to 310s.; fine lemon is 400s: to 410s., fine second Orange 380s. to 385s. RL1 340s., IG 220s., and A.C. cakey 285s. Futures have been dull, the small sales including October 1205s. to 207s. at 295s. to 297s. 6d. and December at 290s.

SPIRIT (METHYLATED).—In consequence of the recent modification of the Government rebate, the price for industrial methylated spirit was reduced 3d. per Imperial gallon as from September 1. Methylated finish, which is made from "industrial" spirit, is reduced accordingly, but there is no reduction in the price of mineralised methylated spirit, there being no Government rebate on the spirit used in manufacturing that kind.

STARCH PRODUCTS.—Farina continues quiet. for September-November shipment is quoted at 28s, 6d. per cwt. c.i.f. Dutch on the spot is 27s. 6d. Maize starch powder is easier, offering at 16s. 3d., and pure Rice starch crystals are offered at 40l. per ton.

TURPENTINE.—A more active and stronger market has developed, which is in line with our forecast a few weeks The feeling in the United States is getting stronger, and insiders may be expected to make the most of the additional export requirements this season, which are believed to be important. Deliveries at this end have been rather on the increase, and dealers seem willing to pay an increased premium on forward contracts. The August imports were 4,183 tons, making 8,853 tons for eight months, against 10,695 tons for same period in 1920. London closes at 68s. 3d. per cwt. on the spot.

WAX, VEGETABLE.—Japanese is firm at 105s. per cwt. on

the spot.

Wood Oil.—Hankow has been sold at 958. per cwt. on the spot, but can now be had at 90s., and for September-October shipment 69s. c.i.f. is queted.

Seeds and Spices

ARROWROOT.—A good business has recently been done in St. Vincent descriptions at from 3d. to $3\frac{3}{4}d$. per lb. for inferior sorts, and at from 4d. to $6\frac{3}{4}d$. per lb. for good to

CLOVES are quiet and a trifle easier, Zanzibar offering at 1s. 3d. per 1b., and for September-October shipment

sellers quote 1s. $2\frac{1}{2}d$. per lb. c.i.f.

GINGER is steady, with spot sellers of Japanese at 458. per cwt. Jamaica continues scarce; it is reported that the 1920-21 crop has been practically a failure, and only 9,000 cwt. was shipped from Jamaica, against about 33,000 cwt. in the previous year.

Pepper is easier, the spot value of fair black Singapore being 41d, and 18 Southeast Newscards and October 19 Southeast States and October 19 Southeast

PEPPER is easier, the spot value of fair black Singapore being $4\frac{1}{8}d$. per lb. September-November and October-December shipments have been sold at $3\frac{1}{18}d$. c.i.f. Lampong is cheaper at $4\frac{1}{2}d$., Tellicherry is $4\frac{3}{2}d$., and Aleppy is $4\frac{1}{2}d$. White is also easier, fair Muntok offering at $9\frac{1}{8}d$. per lb., with September-November and October-December offering at $8\frac{1}{18}d$. c.i.f. Singapore on the spot is 9d., and the value of September-November shipment is 8½d. c.i.f.

SEEDS.—There is no change in prices, which are as quoted in our last week's issue.

Essential Oils

THERE appears to have been a fair amount of business in lemon oil, but while well-known brands have been making the higher prices, re-sale lots are being offered at lower rates, and these, it is stated, are making their presence felt. Price changes are comparatively few, and business, on the whole, again appears to be quiet. Wormseed oil is firmer. Cedarwood is easier, and Cochin lemon-grass is in less demand and quieter. Patchouli and spearmint have an easier tendency. Aromatic and synthetic chemicals are quoted firmer in some directions, pending the coming into force of the Safeguarding of Industries Act. Consumers, however, seem to be filling their needs in some articles at considerably under open market figures. Methyl salicylate is firmer with fair demand.

Anise (Star).—"Red Ship" is steady for spot at from 2s. 3d. to 2s. 3½d. per lb. For shipment 2s. 5d. to 2s. 6d. c.i.f. is quoted, but there are re-sellers at 2s. 2d.

BERGAMOT.—Spot is firm at from 27s. to 27s. 6d. per lb. for 37 to 39 l.a. To come forward quotations are tending easier at 25s. 6d. to 27s. 6d. c.i.f., although in some directions higher prices are still given.

CAJUPUT has been in demand at 3s. per lb.

3s. 3d. is quoted for small lots.

Cassia is firm at 4s. 9d. per lb. on the spot for 80 to

to 85 c.a., and to come forward quotations are made at from 4s. $3\frac{1}{2}d$. to 4s. $4\frac{1}{2}d$. c.i.f.

CEDARWOOD is cheaper, parcels afloat being offered at 2s. 6d. per lb. ex wharf London. Actual spot is quoted at 2s. 9d.

CINNAMON.—Ceylon leaf is unchanged at from $4\frac{3}{4}d$. to

5d. per oz. for spot, and for shipment $4\frac{1}{4}d$. c.i.f. is quoted. CITRONELLA.—Ceylon is steady at 1s. 6d. per lb., spot. There are buyers at 1s. 5d. c.i.f., and quotations are made at 1s. $5\frac{1}{2}d$. to 1s. 6d. Java is nominal at 2s. 9d. to 2s. 10d. spot, and 2s. $10\frac{1}{2}d$. to 3s. c.i.f. is quoted in some directions to come forward.

CLOVE.—There is practically no demand at 9s. per lb., which is about the general figure; a few second-hand

sellers are able to shade this.

LAVENDER.—French oil is quiet and unchanged at from 18s. to 18s. 6d. per lb. for 36 to 40 per cent. ester.

Lemon. —A fair amount of business is reported; sales have been made at from 3s. $7\frac{1}{2}d$. to 3s. $10\frac{1}{2}d$. per lb., according to brand, at which prices there are sellers, up to 4s. being quoted. To come forward from 3s. 11d. to 4s. 2d. c.i.f. are the current quotations, which are steadier.

Palermo, September 8.—Owing to the continued lack of demand from abroad local speculators have lost enthusiasm, and are not so ready to support the upward movement. Although there is nominally no change in prices the tendency is easier, and it is possible to shade the nominal market prices market prices.

LEMONGRASS.—Cochin is quieter again and easier, with sellers on the spot at $3\frac{1}{2}d$. per oz. There are sellers, to come forward, at $3\frac{1}{4}d$. c.i.f.

LIME.—West Indian distilled is unchanged at 2s. 9d. per lb., and hand-pressed is quoted at about 19s. There

is not much inquiry.

MINT.—Japanese dementholised Kobayashi-Suzuki is steady on the spot at 4s. 9d. per lb. and 4s. 6d. c.i.f. to come forward.

Orange.—Sicilian sweet is about steady at from 17s. to 18s. per lb., with small lots offered in some directions at 15s. to 16s., but spot stocks are still scarce. To come forward from 16s. 6d. to 18s. c.i.f. is quoted. West

Indian sweet is selling at 14s. spot.

Palmarosa is quiet and unchanged on the spot at 14s. 6d. per lb. for large pots.

PATCHOULI is quiet on the spot, holders quoting about 42s. 6d. per lb., but bids of less would be accepted.

PEPPERMINT is unchanged on the spot, small lots of American tin oil being quoted at 12s. 6d. to 12s. 9d. per lb., according to brand. H.G.H. is lower at 36s.

Spearming to Spear quoted in one direction.

WORMSEED is firmer; bids of 16s. per lb. c.i.f. have been refused in some quarters, and probably 17s. is the lowest figure for acceptance. On the spot holders are quoting at from 16s. to 17s. 6d. per lb.

Aromatic and Synthetic Chemicals

COUMARIN is offered on the spot at from 9s. 6d. to 11s. per lb. Heliotropine is quoted at from 8s. 6d. to 9s. 6d. per lb. Methyl Salicylate is firmer at from 2s. 3d. to 2s. 4d. per lb. as to quantity. Terrineol is firm at 2s. per lb. Vanillin on the spot is unchanged at 34s. to 35s.

Fixed Oils, etc.

THE market has taken on a much better tone all round during the past week, and generally prices are well maintained, and in a number of instances advances are recorded. Lagos palm oil is dearer, and the tallow auctions realised good prices with quite a keen demand. Acid Oils.—Coconut and palm kernel are both scarce and being inquired for at about 48s. 6d. Groundnut Groundnut continues in good demand as regards pale at about 40s. Bone Grease.—Pale water and brown is being asked for, but there is still practically nothing on offer; values are nominal. Benzine is being offered at 43s., but buyers are holding off for something cheaper. The market for Castor Oil remains on the quiet side, with values about the same at: Pharmaceutical, 60s.; first pressings, 55s.; and second pressings at 50s. Coconut Oil.—There has

not been much movement in this market, but prices are being well maintained, and the market shows no signs of weakening: Deodorised, 65s.; Ceylon, 53s. 6d.; and Cochin, 58s. Cottonseed Oil continues to be a fairly active market, and values are steady at: Dcodorised, 54s.; common edible, 50s.; soapmaking, 49s.; and crude, 43s. FISH OILS are showing up firmer at about 24s. for Japanese in cases, and Coast cod at 29s. 6d. GROUNDNUT OIL remains firm and in steady demand at 61s. 6d. for deodorised and 55s. for crude Oriental. Palm-kernel. Oil continues steady at the unchanged figures of 60s. for deodorised and 51s. 6d. for crude. LAGOS PALM OIL is very firm, with prices much dearer on the week. Lagos, 43s.; softs, 40s.; and hards, 37s. RAPE OIL remains firm, with a moderate demand at 61s. 6d. for refined and at 54s. for crude. SOAP STOCK.—Groundnut is still off the market, there being none on offer; values are nominal. SOYA-BEAN OIL is firm: deodorised is 59s. 6d. and crude Oriental 46s. per cwt. Boiled Linseed Oil on the spot is firm and in good-request at about 43s. With a more active demand for linseed oil, chiefly for export, the market has again advanced, while greater firmness also has prevailed in raw material. The latter fact is having a bearing, of course, on the attitude of crushers. London naked closes at 39s. 6d.; September delivery is 38s. 6d. and October-December 39s., and Hull at 38s. 3d. per cwt. TALLOW.—At the last public sales 1,478 casks met with a very strong demand and were all sold, better grades being 8s. per cwt. dearer, while inferiors were up 4s.; fine mutton, 60s.; fine beef, 60s. 6d.; good mixed, 57s.; inferior, 47s.

Pharmaceutical Chemicals

EVERYONE seems to have a different idea of the current value of materials in this market. Keeping in view the effect the Safeguarding of Industries Act will certainly have on prices when it comes into force, holders of stocks have generally stiffened their quotations, and are showing no inclination to sell at the buyer's idea of a fair figure. A certain amount of speculative business is going on. There is a decidedly better tone to the market, although actual business is still poor, and further firming up of values is not unlikely. It is understood that the list of "key" products, which we were informed by the Board of Trade would be issued on September 12, has been de-layed, and will now probably be ready at the Stationery Office on or about Friday. Although practically every product in this market will come under the "key" duty, there seems to be very little in the way of big importations coming in before October 1. Salicylates are dearer.

ACETANILIDE (crystals and powder) are still steadily quoted at 1s. 4d. to 1s. 5d. per lb., but the market is

neglected.

BARBITONE is now offering in some hands as low as

11s. 6d. Others are asking up to 13s. per lb.

Benzoic Acid remains unchanged on a dull market at 2s. to 2s. 3d. per lb.

BENZONAPHTHOL continues dull, with values fairly steady

at 6s. 6d. to 7s. per lb.

BETANAPHTHOL is still inactive, with good supplies offer-

ing on the spot; values are weak at 3s. to 3s. 3d. per lb. Bromides.—Ammonium is steady at 11d. Potassium is firmer at about $8\frac{1}{2}d$. Sodium is generally offered at 10d. per lb. Although few orders are being placed, values are well maintained.

CHLORAL HYDRATE is unchanged at 4s. 9d. to 5s. per lb. CREAM OF TARTAR. - (Sec Heavy Chemicals.)

CREOSOTE (B.P.) remains quoted at 4s. 9d. per lb., with little activity.

CREOSOTE CARBONATE remains steady at 14s. per lb., with the market dull.

GUAIACOL CARBONATE is now offered from ample stocks down to 13s. 6d. per lb.; other quotations are at 14s. Hexamine has firmed up a little, and nothing now offer-

ing under 4s. 3d. per lb.

Hydroquinone is showing up slightly easier at about

4s. 3d. per lb.; the demand has fallen off.

METHYL SULPHONAL remains steady at 19s, for B.P. and 17s. 6d. for U.S.P., with only occasional inquiry.

PARAFORMALDEHYDE is not being quoted under 3s. 3d. to 38. 6d. per lb., with buyers still holding off.

PARALDEHYDE is firmer, although business is still poor. Holders are not now quoting under 2s. per lb., some

higher.

PHENACETIN has advanced, and few lots are on offcr below 6s. 3d. to 6s. 6d. At these figures the market seems quite steady.

PHENOLPHTHALEIN remains firm at 4s. per lb. on a quiet

PIPERAZINE has advanced to 4s. 3d. per oz.; buyers are not willing to pay this figure so far.

Potassium Permanganate, B.P., has been in fair demand at 1s. per lb. This product will be included in the "key" list.

Potassium Sulphoguaiacolate remains very dull, and values are quoted nominally at about 8s. per lb. for the time being.

Quinine is unaltered, second-hands quoting sulphate at 3s. $10\frac{1}{2}d$. and makers' 4s. 1d. per oz. net.

RESORGIN continues steady at 8s. per lb.; market remains quiet.

Salicylates.—Salicylic acid has advanced considerably, and very little offering below 1s. 7d. to 1s. 8d. per lb. Sodium salicylate is up to 2s. 4d. to 2s. 6d.

Salol is showing up firmer at 2s. 9d. to 3s. after last week's fall.

Sodium Benzoate continues steady but quiet at 2s. 3d. per lb.

SODIUM DIETHYLBARBITURATE is well maintained at 22s. per lb.

TERPIN HYDRATE is unchanged at 3s. 6d. per lb. on a dull market.

THYMOL is quoted at 24s. per lb., with no buyers.

Heavy Chemicals

London, September 14.

THE definite tendency in this market for an all-round firming up of values is certainly not due to any sudden improvement in demand or on account of supplies being scarce. Supplies are generous, and in most cases are much in excess of the present call. It would therefore seem that the cause of the brighter tone is the forth-coming introduction of an import duty of 33½ per cent. on certain products, but as the list has not yet been issued it is difficult to state with accuracy what products will be affected. However, holders seem to consider themselves justified in refusing to accept low bids, and buyers are still looking for further reductions. In the meantime business is, of course, sluggish, with values generally very well maintained. During the last few days quotations from the Continent have been on a much higher level, especially so from Germany.

ACETIC ACID has again experienced a considerable advance owing to higher quotations for forward ship-ments; 80 per cent. pure is now at about 421, per ton, and 98 per cent. glacial at about 52l. 10s.

ACETONE, B.G.S., is lifeless and nominal at about 841. per ton.

ALUM continues to be offered from the Continent at low figures, but importers are not at present interested. Home product is about 17l. per ton.

Ammonia Sulphate.—More interest has become manifest in forward contracts into next year, the market being on either side of 14% per ton, according to grade for home use. There is doubtless a big demand to be expected later on, but it is as yet too soon to look for any great increase of business. The August exports were 7,549 tons, making an aggregate of 84,887 tons for the eight months, compared with 62,868 tons and 210,117 tons respectively for the corresponding period of 1920 and 1913. Out of the total shown so far this year 32,986 tons went to Spain and the Canaries, against only 7,765 tons for the same period in 1920. The Board of Trade (Licensing Section) aunounces that as from September 8, 1921, an open general licence has been issued permitting the export of sulphate of ammonia, and of compound manures having sulphate of ammonia as the only export-prohibited constituent. Applications need, therefore, no longer be submitted to the Imports and Exports Licensing Section in respect of these commodities.

Arsenic.—The tendency continues weak, while there is very little demand, in anticipation of still lower prices, although Cornish agents are said to have only moderate quantities to sell. Quotations are rather widely divergent down to about 30l. per ton, but best Cornish white powder is held for 32l. 8s. per ton delivered London. There is some inquiry for arsenical residues for shipment to the Continent.

BARTUM CHLORIDE (98 to 100 per cent.) is quite neglected, despite cheap quotations from Continent at about 14*l*, per ton. British is about 17*l*.

BARYTES remains steady, with a limited steady demand at about 5l. 5s. up to 7l. 10s., according to quality.

BLANC FIXE shows no signs of weakening from the old

figure of 22l. 10s. per ton; business is poor.

BORAX is unchanged from makers at: Commercial crystals 31l., powdered 32l., B.P. crystals 35l., powdered 36l., extra fine 37l. per ton now being offered for prac-

tically all destinations.

COPPER SULPHATE.—A moderate demand is reported, chiefly for export, and terms continue rather wide at about 30l. to 32l. for casks, less 5 per cent. f.o.b. Liverpool. The greater part of the business is believed to be done at a trifle below 31l. The demand for home use has almost ended so far as agriculture is concerned. The exports last month were only 191 tons, making a total of 24,175 tons for eight months, against 17,731 tons and 72,688 tens reprotively for the same period in 1920. and 72,688 tons respectively for the same period in 1920 and 1913.

CREAM OF TARTAR is showing up a point cheaper at about 122s. per cwt. on the spot.

FORMALDEHYDE seems to be unwanted; the few lots

offering are quoted at about 90%, per ton.
GLAUBER'S SALT is quite neglected; values quoted at 5l. per ton for commercial quality in bags.

LEAD ACETATE remains very quiet; white crystals easy at 52l. and brown broken at 47l. per ton.

LEAD PRODUCTS.—There has been rather a better in-

quiry for red lead and litharge, but this chiefly refers to foreign material, which is being imported on terms at well under home makers' prices. The main outlet would seem to be at the moment with rubber manufacturers. White lead is quiet. Home makers of compounds have retained their previous rates all round.

LITHARGE is steady at about 33l. 10s. for imported material, and a little business continues to be done.

LITHOPONE continues quiet; 30 per cent. Continental red seal is a little steadier from 26l. per ton upwards; light resisting at about 281.

Oxalic Acid is firmer this week at $7\frac{1}{2}d$, to 8d. per lb. owing to its probability of coming under the "key" duty.

POTASH CAUSTIC continues to drag; the few lots offering on spot at about 30l. to 31l. per ton are difficult to move. Cheaper prices for forward delivery are quoted from the Continent.

POTASSIUM BICHROMATE remains dull, with values weak

at about $8\frac{1}{2}d$. per lb.

Potassium Carbonate is inactive, with quotations main-

tained at 26l. per ton.
Potassium Permanganate still finds limited outlets for commercial quality at about 11d. per lb. for imported material.

Potassium Prussiate continues unchanged at 1s. 2d. for yellow and 2s. to 2s. 3d. for red; the latter will probably be a "key" product.

SALTCAKE remains lifeless; there seems to be no call whatever, and low offers from Continent are of no interest.

Soda Ash (58 per cent. light alkali) is still sluggish; parcels on the spot continue to be offered at about 8l. 5s. per ton f.o.b., but the demand is very poor. Makers continue to quote at 8l. 10s. for home trade only and 10l. 5s. for export.

Soda Crystals remain at the old figure of 7l. per ton, ex works or station, in single bags for home trade only.

SODIUM BICARBONATE has fallen off in demand, but the few lots offering on the spot are being maintained at

12l. to 12l. 12s. per ton.

Sodium Bichromate is offered on the spot at about 6d. per lb., but there are very few inquiries coming through.

Sodium Caustic ex makers' works, for home trade only, remains unchanged at 70 to 72 per cent. 24. 10s., and 76 to 77 per cent. 26l. 15s. per ton; spot parcels are dragging on the market at 22l. 10s. for 70 to 72 per cent. and 25l. for 76 to 77 per cent. Just at the moment the market seems dead.

SODIUM CHLORATE remains unchanged at about 33d. to

4d. per lb., with the market remaining quiet. Sodium Cyanide is quoted for export at 11d. to $11\frac{1}{2}d$.

per lb., but inquiries are few and unlimited in size. Sodium Hyposulphite remains weak and quiet; ample

supplies are on the spot, with only a very poor demand, at 20l. per ton for pea crystals in 1-cwt. kegs and 14l. 10s. for commercial quality imported material; makers now quote 19l. for photographic and 15l. for commercial.

SODIUM NITRATE (96 per cent.) is now quoted at 18l. 5s.

per ton on a quiet market.

Sodium Nitrite is slightly easier at about 38l. to 39l.

per ton for 100 per cent.

SODIUM PRUSSIATE is quoted at an advanced figure, and the market seems firm at $7\frac{1}{2}d$. per lb., one or two lots perhaps a shade cheaper.

SODIUM SULPHIDE continues quite neglected; spot lots are still nominally 24l. per ton; makers offer 60 to 65 per cent. concentrated in casks at 22l. per ton.

TIN CRYSTALS remain steady at 1s. 5d. per lb.

ZINC PRODUCTS .- Zinc oxide is steady, home makers being hardly disposed to make further concessions from recent rates, in spite of Continental competition. White seal stands at 42l. 10s., green seal at 40l., and red seal at 38l. a ton, free on rail. Zinc dust is slow. English is quoted 52l. 10s. for high-grade, and Australian is worth 55l

COAL-TAR PRODUCTS.—The few alterations recorded this week show slight advances in values. Benzol is quoted at a higher figure; while the market has not been quite at a figher fighte; while the market has not been quite steady. Aniline oil and salt remain unchanged at 1s. 2½d. and 1s. 4d. per lb. Betanaphthol remains steady, but rather dull, at 1s. 9d. per lb. Benzol is now quoted at the fresh figures of 3s. per gallon for pure and 2s. 7d. for 90. Toluol is also dearer at 2s. 11d. for pure and 2s. 7d. for commercial. Creosote oil remains unchanged and fairly steady on a quiet market at 9d. per gallon. Carbolic-acid crystals. quiet market at 9d. per gallon. Carbolic-acid crystals continue in over-supply on the market, with only small demand; values remain weak at 7d. per lb. Naphthalene is quoted at about last week's figures, but few orders are being booked: Crude 5l. to 9l. per ton, crystals 22l., flakes 23l. Pitch is fairly steady at about 85s. per ton in barrels.

Indian Oil-seeds

THE report of the Indian Committee of the Imperial In-The report of the Indian Committee of the Imperial Institute on the trade of India in oil-seeds has been published by Mr. John Murray, price 6s. net. The volume emphasises in a striking way the great importance of the Indian oil-seed industry. The total annual production of oil-seeds of all kinds in India is probably well over 5,000,000 tons in quantity and 50,000,000% in value; in normal times approximately one-third of the output is exported. Of the ten chief of these—viz., lin, ground-nuts, cotton, rape, castor, sesame copra moura noutput, and niver seed—India supplies sesame, copra, mowra, poppy, and niger seed—India supplies no less than 30 per cent. of the total amount entering commerce. Previous to the war about one-third of the total quantity of oil-seeds exported from India came to the United Kingdom, the chief kinds being cotton, lin, and center. United Kingdom, the chief kinds being cotton, lin, and castor. Ground-nuts, sesame, copra, and mowra were shipped mainly to France, Germany, and Belgium. Various suggestions are made by the Committee with a view to extending the trade with the United Kingdom and developing the British oil-seed crushing industry. It is considered that a free choice of the raw material produced within the Empire should be secured for this industry, if necessary by a system of rationing and licensing in the producing country. If further assistance is required an import duty should be imposed on oils and fats of all kinds imported to the United Kingdom from foreign countries. The Committee consider that the latter method would be more should be imposed on oils and fats of all kinds imported to the United Kingdom from foreign countries. The Committee consider that the latter method would be more satisfactory than a preferential export duty on oil-sceds. A memorandum on the effect of import tariffs on the oilseed crushing industry, by Mr. J. W. Pearson, chairman of the Seed-Crushers' Association of the United Kingdom, is appended to the report. The volume also contains a detailed account of the Indian trade in oil-seeds, prepared at the Imporial Institute for the Committee. at the Imperial Institute for the Committee.



Letters for this section should be written on one side of the paper only.

The writer may adopt an assumed name for purposes of publication, but he must in all cases furnish his real name and address to the Editor.

Dangerous Drugs Act

SIR,—On August 20 we made application to the Home Office for a licence under the above Act, and in particular for authority to purchase a case of opium which we were in urgent need of for manufacturing into liquor opii for the execution of orders in hand. More than three weeks have elapsed and we are still without a reply to our application. We enclose copy of a letter we addressed to the Home Office on September 5, to which we have received no reply. The restrictions on trade, both wholesale and retail, imposed under the Dangerous Drugs Act are sufficiently exasperating in themselves, but that licences should not be available at the time the Act came into force is another instance of the hopeless methods of the new bureaucracy.

Yours faithfully, F. W. FLETCHER,

Governing Director, Fletcher, Fletcher & Co., Ltd. Holloway, London, N.

The letter to the Under Secretary of State is as follows: Referring to our application of August 20 and subsequent letter of August 26, acknowledged in yours of 23rd and 29th ult., reference 401446/4, we have not yet received the licence for which we have applied, and as we have several orders in hand from pharmacists for preparations of opium, etc., urgently needed, we beg to inquire whether we are at liberty to supply these pending the issue of the licence, or in the alternative to inform our customers that, owing to the delay in issuing the necessary wholesale licence, any prescriptions they may have in hand from medical practitioners cannot be dispensed. Awaiting the favour of a definite reply at your earliest convenience.

Synthetic Perfumes

SIR,—The Chemist and Druggist, August 13 (p. 69), contains a letter by the eminent authority, Mr. Ernest J. Parry, evidently referring to an article which appeared in the July number of the "Perfumery and Essential Oil Record" on the controversy between Ungerer & Co. and the United States Treasury Department over import licences for perfume materials and aromatic "isolates" (essential-oil derivatives). In this letter Mr. Parry generously upholds our contentions regarding citronellol and geraniol, but takes occasion to make remarks later in his letter which appear to indicate inadequate study of the article which he criticises. He says in effect that Ungerer & Co. put forward the "absurd" claim that the chief source of phenylethyl alcohol is otto of rose, and that of cinnamic aldehyde cinnamon or cassia oils. He might as rightly have accused us of claiming that the valualla bean is a source of vanillin. As a matter of fact, the article to which he refers contains a very incomplete list of the constituents of essential oils (volatile oils) in which they occur. No claim was put forward that any of these bodies were obtained from the oils mentioned, although some of them are, commercially. We quote the introduction to this list:

Ungerer & Co., in a spirit of mutual helpfulness, submitted to the Department a partial list of aromatic constituents of essential oils as enumerated by the leading authorities on the subject, and suggested that possibly the list might be useful to the official in passing upon future applications, and as a reference in the matter of determining the relations and differences between natural aromatic isolation products which through misunderstanding have in many technical quarters been erroneously classified as "synthetic aromatic chemicals."

We would respectfully suggest to Mr. Parry that he

We would respectfully suggest to Mr. Parry that he read with closer attention the letters and articles emanating from Ungerer & Co., which, we may honestly state, are invariably studied and exact.

Very sincerely yours,

UNGERER & Co.

124 West Nineteenth Street, New York.

Insurance Committees

SIR,—The National Health Insurance Committees go out of office on October 31, and it will be interesting to your readers to know that their representatives on those Committees have fully justified themselves from a public point of view. The Ministry of Health in one of its notices makes use of the following statement in regard to pharmacists:

The inclusion of pharmacists amongst the representatives to be appointed by the Department is not prescribed by the terms of the Act or Regulations, but in the view of the Minister at least one pharmacist of experience should be included in the membership of each Insurance Committee.

There is also one other point of interest in regard to the constitution of the new Committees. They are to be smaller in numbers than in the past, but provision has been made for appointing two pharmacists on new Committees having a membership of forty. This is satisfactory as a further recognition of the usefulness of pharmacists in regard to public work.

Yours faithfully, G. A. Mallinson, Secretary, Retail Pharmacists' Union.

19 Tavistock Square, London, W.C. 1.

Prescription Pricing

SIR,—I was pleased to see in Mr. Arthur Mills' letter (C. & D., September 10, p. 55) that the system of marking scripts with a private mark works well in Eastbourne. I have long wanted to know whether such a system could be worked successfully, as in my neighbourhood it would probably only be an incentive for somebody else to cut the price. At the same time I should like to know if there are any of the big company shops or other stores with drug departments in the town, and whether they also adhere to the rule, or if the pharmacists can afford to ignore them.

Yours, etc.,

SYSTEMA (19/9).

SIR,—Your correspondents "Container" and "Dispenser" (C. & D., September 3, p. 69) appear to have misread my letter in your issue of August 27. The contributor of the article (C. & D., August 20, p. 51), upon which my letter was based, appeared to be of opinion that the price of 1s. 10d. was the result of lack of system in arriving at a proper charge. My aim in writing was to show what very great divergence of view exists among pharmacists as to what is a proper charge, as illustrated by the tariff proposed by the local Association, but which was not adopted, not on account of being too low, but too high. My objection to "Container's" method can best be illustrated by its application to a prescription recently dispensed by me:

Sodii iodid, ... gr. x,
Sodii chlorid. ... gr. iiss.
Aq. dest. ad ... 5j.

Fiat guttæ: Mitte 5ij.

Ung. acid boric ... 1 per cent.
Mitte: 5j.

It occurs to me that in such a case ingredients plus container plus 50 per cent. profit plus a 6d. dispensing fee is not going to cover working expenses. The M.R.P.L. system does so every time, and equitably so. I would ask your correspondent "Dispenser" to note that the charge allows ten minutes to dispense that particular mixture, and I should be indisposed to continue the employment at 2s. 6d. per hour of a dispenser who could not copy, dispense, and finish six such prescriptions per hour, i.e., of course, in a reasonably well-organised dispensing establishment. This matter of pricing is undoubtedly one that should be most seriously taken up in every district; inferentially we have evidence that some at least of the multiple traders have already taken it up and adopted the M.R.P.L. system, or some slight modification of it, as disclosed by prosecutions under the Profiteering Act, while we have still highly respectable private pharmacists charging by size and dose, apparently without reference to cost. For instance, on September 9 I had a prescription tendered for dispensing in which cost of ingredients and bottle (8 oz.) amounted to 1s. 9d.,—which had been dispensed locally, at a private pharmacy of probably sixty

years' establishment and still in same family, for 1s. 6d. Knowing the man and his methods, I have no doubt whatever of the customer's statement. It is our own craft who require to be brought back to a rational view of what is due to them. Yours, etc.,

FAIR-PAY (15/9).

Drugs in Dysentery

SIE,—I have been much interested in the correspondence on this subject, but I am afraid Mr. E. M. Holmes has not added to our sum of knowledge of the subject by has not added to our shift of knowledge of the subject by his praise of ispaghol seed in last week's issue of your valued journal C. & D., September 10, p. 55). My first acquaintance with the seeds of Plantago orata goes back more than a quarter of a century, and in those days they certainly did enjoy a reputation for the treatment of chronic dysentery and diarrhea, but at that provided the causal corrections of dysentery were not period the cause-or rather causes-of dysentery were not recognised. The bacillus dysenteria had isolated, and we had rever heard of the amoeba; indeed, the protozoal infections generally had not been dreamed of, and I remember distinctly being pointed out the miasma of malaria hanging over an Indian village. Mosquitoes were looked upon as irritating pests, but Ross had yet to demonstrate their murderous mission in the dissemination of the minute protozoa which are the causal agents of malaria. We now recognise two—or at least two—clinical entities in what we at that time looked upon as a single disease, and, what is more, we know that the two types require to be treated entirely differently. Bacillary dysentery rapidly responds to what is called saline treatment, and if administered sufficiently early our old friend mag, sulph, 5j. every two hours rapidly relieves the distressing symptoms so familiar to your tropical readers. On the other hand, ipecacuanha is a specific for the amœbic variety, and, in the form either of the powder the treatment of the malady. The bacillary type does not tend to become chronic, but the amœbic variety, if not vigorously treated, does. The chronic cases are not, as a rule, the cases which have been treated intelligently; they are mostly mild infections called "touches of dysentery" by the sufferers, which have never really been treated at all. These are the cases which give the trouble at the Tropical Diseases Clinics of the Ministry of Pensions. Many of them succumb to a course of twelve doses of emetine bismuth iodide 5 grains in stearettes or salot-coated pills, and those which do not usually yield to decoctum simarubæ et punicæ granati, which Mr. Holmes will find described on p. 823 of the last edition of "Martindale." These four remedies, with possibly the addition of the salot properties of the salot possibly the addition of the salot properties the salot proper addition of rhubarb, constitute the armamentarium of the modern tropical practitioner against what most doctors in the tropics regard as the "Captain of the Men of Death," to use the term employed by Bunyan with regard to phthisis. As for ispaghula, the pinkish-brown boatshaped seeds yield a pleasant demulcent; they were exhaustively examined by F. B. Power and T. Callan in 1913. The drug is about as valuable in the treatment of dysentery as linseed or barley. Mr. Holmes is on safer ground with reference to *Holarrhona antidysenterica*. This drug was reported on favourably by the Indigenous Drugs Committee of the Government of India in 1916. Martindale says it contains an alkaloid called kurcheine, which is doubtless similar to emetine.
Yours sincerely,

AN INDIAN PHESICIAN (10 '9).

Subscribers' Symposium

An Assistant's Budget
Lucullus (13/9) writes: As a practical contribution to
the problem of pharmacy, will some of your readers—
masters or employed—say how they think a married
assistant, with one child, should spend his weekly salary
of 42. My rent is 201., and rates 171. per annum.

Inebriety Treatment

J. M. (16/9) asks for information as to a harmless method of diminishing a great craving in a habitual drunkard for beer. The remedy should preferably be one that could be administered secretly in coffee or cocoa.

Legal Queries

Verax (31/4).—The "safety limit" of tr. opii in a mixture is mcvj in 3j. Your formula for "All Fours" exceeds this limit.

- A. E. (10/9), H. T. C. (12/9), Entre Nous (1/9).—For two "All Fours" formulas which are outside the Dangerous Drugs Act see p. 51 of this issue.
- G. B. (7/9).—Neither codeine (methyl morphine) nor dionine (ethyl morphine) is included in the Dangerous Drugs Act definition of "dangerous" drugs.
- H. J. W. (12/9).—We think that the delay in receiving a reply from the Home Office regarding a wholesaler's licence to sell "dangerous" drugs is only due to the large number of applications which have been received. There is a substantial fee required for the licence.
- F. R. L. (10/9).—The Dangerous Drugs Act and the Regulations (C. & D. II., 1920, p. 1239, and I., 1921, p. 739) contain the official information applicable to wholesalers, but we cannot designate these documents as "concise." It was the object of the Dangerous Drugs Act Card to give the Regulations and other information for chemists in a concise form.

Optimus (15/9).—(1) Liq. morph. hyd. can be present in a mixture up to the "safety limit" of mcvj. in §j., so that the prescription you give is outside the Dangerous Drugs Act. (2) No record is necessary in the Dangerous Drugs Act Record, as in the dilution given the liq. morph. ceases to be a "dangerous" drug.

S. O. (12/9).--(1) As we have pointed out in the C. & D., tr. camph. co., and chlorodyne, B.P. 1885, are both outside the Dangerous Drugs Act, and when both are in the same diluted mixture in the proportions you give the mixture is outside the Act. (2) A cough-mixture containing tr. opii 5j. in 3viii. is outside the Dangerous Drugs Act. No prescription is required before this can be sold retail.

Miscellaneous Inquiries

T. W. (3/9).—Books on Organic Chemistry, etc.—Cohen's "Theoretical Organic Chemistry" (Macmillan, 7s.); Fuller's "Chemistry and Analysis of Drugs and Medicines" (Chapman & Hall, 55s.); Allen and Leffmann, "Commercial Organic Analysis," 9 vols. (Churchill, 101. 19s.). Dragendorff's "Plant Analysis" is out of print and in many respects obsolescent, but copies can often be obtained second-hand copies can often be obtained second-hand.

W. N. A. (31/8).—Purifying Swimming Baths.—When copper sulphate is employed for preventing the formation of algæ the strength should not be more than one in a million. Chlorine is also employed in some public baths for purifying purposes.

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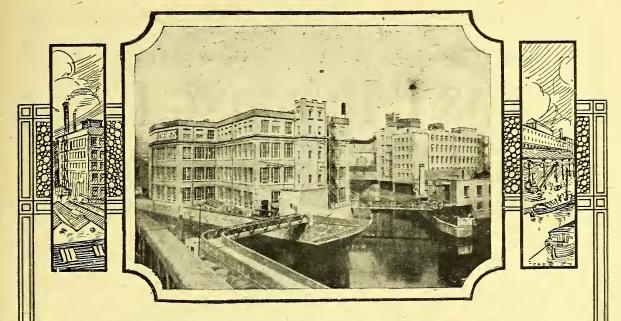
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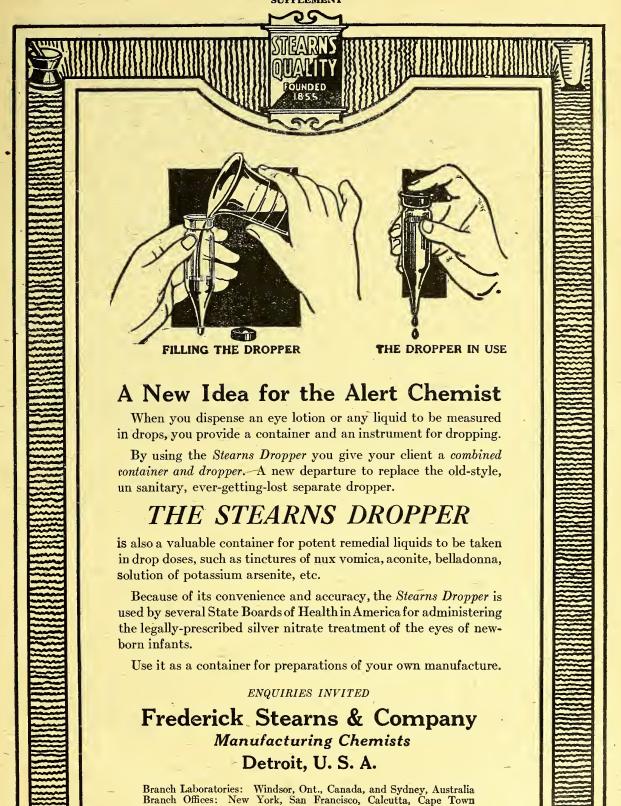
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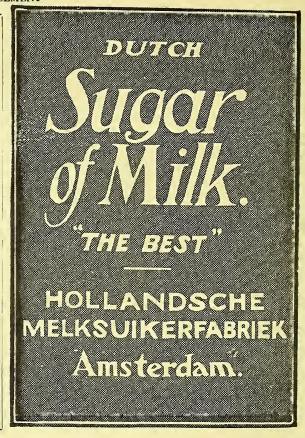
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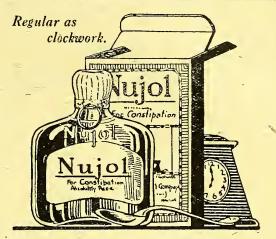
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Stimulating Embrocation	4 oz. 1/9	An emulsion of oil of origanum, camphor and rectified oil of turpentine, with ammonia, issued in glass-stoppered bottles of distinctive shape.
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Inhalone	1/3	An anti-bacterial, soothing and emollient nasal application. Issued in a collapsible tube with an elongated nozzle to facilitate direct application.

Other important preparations are Euthymol Tooth Paste, Euthymol Cold Cream, Euthymol Cream, Euthymol Talcum Powder, Boroseptic Ointment, etc.

A card will bring you a list with best terms and retail and wholesale prices corrected to date.



PARKE, DAVIS & CO. 50-54, Beak Street, LONDON, W.1.

Laboratories - - Hounslow, Middlesex.

A Perfect Product

Pepsin (Armour) in Scale, Granular and Powdered Form, is a permanent product, preeminent in proteolytic power, free from objectionable odour, readily soluble in water—plain or acidulated, dilute alcohol, elixirs, syrups, and all liquids compatible with Pepsin, and non-hygroscopic; in short, a perfect Pepsin for dispensing and manufacturing purposes.



Armour and Company, Limited

Queen's House, Kingsway

LONDON, W.C. 2.

Pituitary Liquid, Ampoules,

l c.c., ½ c.c. Physiologically standardised. Free from preservatives.

Pituitary Powder and Tablets, Whole gland.

Pituitary, Anterior,
Powder and Tablets.

Pituitary, Posterior,
Powder and Tablets.

Corpus Luteum,
Powder, Tablets and Capsules.

Placental Substance, Powder and Tablets.

Parathyroid, Powder and Tablets.

Peptonum Siccum.

Suprarenal Cortex, Powder and Tablets.

Suprarenal Medulla, Powder and Tablets.

Thromboplastin Solution.

Extract Red Bone Marrow
Flesh Maker and Blood Builder.

Suprarenalin,

The Astringent hæmostatic and pressor principle of the Suprarenal or Adrenal gland.

Suprarenalin Solution,
Stable, uniform and free from preservatives.

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Petroleum Jelly

White, Yellow, Amber, & Ruby Red, for all Pharmaceutical and Veterinary purposes

MEADE-KING, ROBINSON & CO., LTD. LIVERPOOL - MANCHESTER - LEEDS.

SALVO PETROLIA

The Perfection of Petroleum Jelly

MANUFACTURED SOLELY BY

THE DEE OIL COMPANY, Ltd. DELTA WORKS, BOOTLE, LIVERPOOL.

Packed in barrels, kegs and smaller packages according to requirements.

Other Grades

PETROLEUM JELLIES, WHITE BASES, ETC.

Samples and prices on application.

"OLEUM DEELINÆ," a certain cure for Eczema.

Phone: 186 Bootle.

Wires: " Cestrian Liverpool."

ESTABLISHED 1839

CHEMISTS' OVERALLS From GARDINER & CO.

We supply protective overalls in any colour or style required. They are made by experienced hands for all branches of the Chemical trade.

KHAKI DRILL ... 10/6 15/6 17/6

WHITE DRILL ... 12/6 BLACK DRILL ... 17/6

Sizes 34, 36, 38, 40, 42 and 44 inches over waistcoat. SPECIAL QUOTATIONS FOR QUANTITIES.

GARDINER & CO. (THE SCOTCH) LTD.

1 Commercial Road, E.1.

Teleg.: "Durastyle, Phone, London." Phone: Av. 6650 (4 lines).

Ralty Home Dyes

"Press the Bulb and start dyeing."

USING Ralty Dye is simplicity itself, if you can use a fountain-pen filler, you can use Ralty—it's just the same. A thin filter-cloth encloses the dye powder, and the colour can only leave the tube in solution.

The colour is rich, even and fadeless, and can be made bright or subdued by simply pressing the bulb.

Housewives everywhere are asking for Ralty Dyes. Supply them and get a good profit! "Once bought, always bought," is the retailer's experience.

WRITE for SAMPLES & PRICES

Art Showcards, Caunter Boxes and strang advertising are making the Ralty Dyes an easy and profitable line for the Trade. Write direct ta:—

ECROYD & COMPANY

RALTY WORKS, FARNWORTH, BOLTON.

To Chemists

If we were desirous of giving you Testimonials as to the quality and expedition of our work we could do so, but they would take up too much space in our advert. It is sufficient for us to have the appreciation of our customers, who are always talking about us, and that is what they do. Thus they keep us busy, and always keep us thinking how we can improve our work, with a desire to serve them to our utmost.

Labels, Cartons, Pockets, Handbills,

are daily requirements of the Chemist. Send your next enquiry to



Full Set of Samples to Collinies for 10/6, which amount we credit on orders of £10 and upwards.



Established over a Century. SAMUEL THORNLEY, LTD. WHOLESALE DRUGGISTS AND DRYSALTERS, OIL IMPORTERS, GREASE AND VARNISH MANUFACTURERS. Members of the Methylating Company, Limited. Telephone: 1271 Central (3 lines). Telegrams: "TURPS B'HAM." Slaney Street, Wharf Street. SIANE STREET. JOHN BRIGHT STREET. JOHN BRIGHT STREET. JOHN BRIGHT STREET. JOHN BRIGHT STREET.

PETROLEUM JELLY.

Gough, Kidston & Co.

Tel. No.: Avenue 8057. (2 lines). Tel. Add.: Kidstonism. Bilgate, London." Chemical Manufacturers,
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BERMONDSEY.

43/45 Gt. Tower Street, London, E.C.3. Tel, No.: Hop 2029.

BISHOP'S NATURAL FRUIT SALINE

What it is.

BISHOP'S Natural Fruit Saline

is free from sugar or saccharine, yet makes a delightfully palatable beverage. Clears the liver and kidneys, and acts as a laxative. It is manufactured in small granules and keeps well in any climate.

It pays to push BISHOP'S!



What it costs.

BISHOP'S Natural Fruit Saline

retails at 2/3 per bottle P.A.T.A.

Wholesale price, 20/per dozen.

5 dozen - - £5 0 0 10 % discount 10 0

Net £4 10 0

Carriage Paid.

Thus showing a profit of 9d. per bottle.

Attractive show material and price cards sent with each order.

PREPARED ALFRED BISHOP, LIMITED, 48 Spelman St., LONDON, E. 1

SUGAR CHEAPER

THIS MEANS THAT

Mason's Extract of Herbs

Will be in big demand this season

and chemists are requested to replenish their stocks.

Send for Price List to

Newball & Mason NOTTINGHAM,

Watch: "NuVita"

"Nuvita" begins a new era in Digestive Biscuits. Its composition is based on the latest discoveries of medical science. Its wonderful effects are bringing it daily into greater and greater demand. Lancet says:—"Useful in a number of conditions."

THE

New and Wonderful Digestive Biscuit

The merits of "Nuvita" are now being brought to the notice of the public by professional recommendation and by advertising. Be prepared !

Write for trade terms and full particulars.
Kingston Cake Bakery, GLASGOW.

VITMAR

The new vitalising food proved to contain the three principal vitamines

YOUR WHOLESALERS CAN SUPPLY YOU

Manufacturers:

Food Specialists,

CALLARD & CO., 74 Regent St., LONDON, W. 1.

IMPORTANT.

Natural Mineral Waters.

WE beg to inform the Trade that we are now regularly receiving consignments of Natural Mineral Waters from the Continent and other parts of the World.

We are thus in a position to execute orders for the leading well-known Natural Mineral Waters, as under:—

VICHY-CÉLESTINS

AND THE OTHER STATE SPRINGS

AESCULAP
AIX-LES-BAINS
APEN IA
APOLLINARIS
CHATEL-GUYON
CARLSBAD
CARLSBAD SPRUDEL SALT
CONDAL
CONTREXEVILLE-PAVILLON
EVIAN-CACHAT
FARRIS
GIESSHUBLER (Mattoni)

HUNYADI JANOS INSALUS KRONENQUELLE LA BOURBOULE LEVICO MONTMIRAIL MONTREUX PELLEGRINO PERRIER PLOMBIERES PLUTO POLAND
PURGOS
RUBINAT
ST. BOES
ST. GALMIER
SANGEMINI
SELTERS (in stone jugs)
TANSAN
VALS
VILLACABRAS
VITTEL, etc. etc.

Prices of the above quoted on application.

Any Natural Mineral Water not in stock, if procurable, can be imported to special order during the Season.

INGRAM & ROYLE, Ltd.

BANGOR WHARF, 45 BELVEDERE ROAD, LONDON, S.E.I.

Telephone: HOP 4343 (2 lines).

Telegrams: "INGRAM ROYLE, WATLOO, LONDON."

LIVERPOOL: 19 South John Street.

Telephone: BANK 4528.

Telegrams: "CELESTINS LIVERPOOL."

BRISTOL: Bath Bridge.

Telephone: 1113.

Telegrams: "SPRUDEL BRISTOL."

Season-1921.



GOD LIVER OIL

GUARANTEED GENUINE

Manufacturers:

BRÖDR. AARSÆTHER A/S, Aalesund, Norway.

LARGEST MANUFACTURERS OF COD LIVER OIL IN NORWAY.

Wholesale only.

In 25-gallon tin-lined barrels.

SOLE ACENTS FR

DENTHEIL. SMITH & CO.

Tel. Add.: "FREUDENRUF."

21 Mincing Lane, LONDON, E.C. 3. Codes used: ABC, 4th & 5th Edit.; and Private.

Tel. 12513 Central.

ATKINSON & BARKER'S INFANTS' PRESERVATIVE

THE BEST AND SAFEST INFANTS'
MEDICINE OF OVER 120 YEARS'STANDING.

Prices and Terms on application to R. BARKER & SON, Ltd. 13 Wesley St., C.-on-M., MANCHESTER. DOES
NOT
CONTAIN
any
SCHEDULED
POISON.

MALT

We Specialise in MALT EXTRACT

EXTRACT

COD LIVER OIL

PREPARED UNDER IDEAL CONDITIONS FROM FINEST QUALITY MATERIALS SUPPLIED IN SPECIALLY ATTRACTIVE CONTAINERS WITH CUSTOMER'S OWN NAME & ADDRESS

YOU CANNOT BUY BETTER.

JEFFREYS, MILLER & CO., LTD., Leyland Mills, WIGAN.



Sells readily ALL the time.

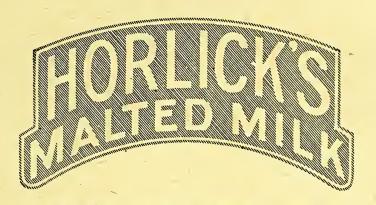
COLEMAN & CO., Wincarnis Works, NORWICH.

IMPORTANT NOTE

TO CHEMISTS

WITHOUT LICENCES

It has been established by law that Registered Chemists may sell "Wincarnis with Quinine" without a licence.



MADE IN ENGLAND.

The Sale of Horlick's Malted Milk—the Original—is and always has been directed through Chemists, while substitutes and imitations are often exploited through other Trades.

The Price is Protected.

Attractive advertising material for Window Display and Counter Distribution free and carriage paid on application to the Company.

HORLICK'S MALTED MILK CO., slough, bucks, england.



Careful Mothers insist on the NESTLÉ FEEDER

The superiority of the Nestle Feeding Bottle is so obvious that doctors are advising it, nurses are recommending it and mothers insist on having it. Nothing is good enough for their little ones but a bottle which is perfect in hygienic construction; which cannot possibly harbour dirt or disease germs and which ensures that the food is taken without undue effort or excessive air.

Nestle's Feeding Bottle is constructed throughout on scientific principles, it is impossible for the child to detach the teat and rubber valve which automatically cling and are made from pure plantation rubber. Colic is prevented because the flow of air behind the milk is systematically regulated. The feeder, made of virgin glass, can be tilted to and will remain at any desired angle. Its capacity is 10-oz., and every part, including the box, is thoroughly sterilized before leaving the factory.

NESTLE Feeding Bottle

the Cheapest full-sized Feeding Bottle on the Market.

Easy to sell; brings good profit and rapid turnover. Write to-day for full details and current trade price list.

NESTLE'S (Advert. Dept.), 6-8 EASTCHEAP, LONDON, E.C. 3.



CORN VELVET

With the "Cornfield" on the Packet.

36/- gross 6/6 doz. 4½d. packets; 10½d. cartons. A VERY GOOD SELLING LINE.

HOWARD Cloth Cleaners

A Dainty White Cube in attractive Carton. 3/- doz.; 3 doz. 2/9 doz.; 12 doz. 2/6 doz. SELLS READILY AT 6d. EACH.

THOS. SWALES

20-24 BUTTS COURT & 89 ALBION STREET LEEDS

The Marvel Whirling Spray Syringe



Gold Medal Awarded, Paris, 1902, by the Société d'Hygiene of France

as the latest and best improvement in Vaginal Syringes. Particular attention is called to the fact that by reason of its peculiar construction the Marvel Syringe dilates and flushes the vagina with a volume of whirling spray, which smooths out the folds and permits the injection to come into contact with and cleansing the entire surface.

Fully Protected by Patents.



MARVEL





You can safely recommend it.

Has no rival on the market, is well advertised, pays a good profit, quality guaranteed. The MARVEL is returnable for exchange if found defective and reported promptly.

> Trade price, 125/- per doz. Retail price, 15/- each.

FASSETT & JOHNSON, Ltd. 86 Clerkenwell Rd., London, E.C. 1.

SAYERS, SILCOX, CUZNER & Co. Ltd. HULL.

THE

TRUSS

MAKERS

ARE ALSO MAKERS OF

BELTS, CORSETS SUSPENSORY BANDAGES CHEST EXPANDERS CHEST PROTECTORS PNEUMONIA JACKETS WRIST - STRAPS FINGER-STALLS

and all similar articles.

LOWEST PRICES. IMMEDIATE DELIVERY.

CURASOL

THE ORIGINAL

Boracic Socks

Fixed Selling Price, 6d. per pair.

Cost, 4/- per dozen.

Six dozen lots, 46/- per gross.

Distributing Agents:

England and Wales—

Sangers, 42a Hampstead Rd., London, N.W.1.

Scotland—

Munro, M'Laren & Sutherland,

17 Cadogan Street, Glasgow.

For Sample Pair (state size) send Postcard to—

The Curasol Sock Co.

19/20 Garlick Hill - LONDON, E.C.4.

TOWN COMMON CO.

19/20 Garlick Hill - LONDON, E.C.4.

TOWN COMMON
THE CHEMIST AND DRUGGIST SEPTEMBER 17, 1921 HOT-WATER BOTTLES THE "EMPIRE" BRAND If you wish to keep up your reputation for reliable quality, you must continue to stock our "EMPIRE" brand of Hot-Water Bottles. Do not risk trying an unknown make. One quality only—the Best. Guaranteed for two years. Prices as follows: | Sizes: inches 6×8 6×10 6×12 8×10 8×12 8×14 10×12 10×14 Each 3/9 4/2 4/6 8/9 5/3 5/9 6/- 6/6 Each Bottle in a strong paper bag, with directions for use. HOT-WATER BOTTLE COVERS. Scarlet or Grey Plush. Sizes: inches 6×8 6×10 6×12 8×10 8×12 8×14 10×12 10×14 Each 1/5 1/8 1/10 2/- 2/2 2/8 2/10 3/3 MUJFF WARMER. Drab Rubber, 4×61n. Each 2/- A discount of 5 % for prompt cash is allowed on all amounts of 10/- and upwards. Money returned if goods are not satisfactory. Write for illustrated PRICE LIST, post free for the asking. BURGE, WARREN & RIDGLEY, LTD. 91 & 92 GREAT SAFFRON HILL, LONDON, E.C. 1. HOT-WATER BOTTLES THE "EMPIRE" BRAND If you wish to keep up your reputation for reliable quality, you must continue to stock our "EMPIRE" brand of Hot-Water Bottles. Do not risk trying an unknown make. One quality only—the Best. Guaranteed for two years. Prices as follows: Sizes: inches 6×8 6×10 6×12 8×10 8×12 8×14 10×12 10×14 Each 3/9 4/12 4/6 4/9 5/3 5/9 6/- 6/6 Each Bottle in a strong paper bag, with directions for use. HOT-WATER BOTTLE COVERS. Scarlet or Grey Plush. Sizes: inches 6×8 6×10 6×12 8×10 8×12 8×14 10×12 10×14 Each 1/5 1/8 1/10 2/- 2/2 2/8 2/10 3/3 MUFF WARMER. Drab Rubber, 4×6 in. Each 2/ A discount of 5 % for prompt cash is allowed on all amounts of 10/- and upwards. Money returned if goods are not satisfactory. Write for illustrated PRICE LIST, post free for the asking. BURGE, WARREN & RIDGLEY, LTD. 91 & 92 GREAT SAFFRON HILL, LONDON, E.C. 1.



YOUR ENQUIRIES SOLICITED FOR OUR

GUARANTEED

OWN NAME (IF REQUIRED)

ON LOTS, OF DOZENS.

ARTHUR BERTON, Limited,

15-17, WORSHIP STREET, LONDON, E.C.2 MANCHESTER and GLASGOW.

77 Lower Chatham Street.

11 Miller Street.

Telegrams: "Aybelim, Finsquare, London." Phones: Clerkenwell 1347, 1348, 1349 (Private Exchange).



(The World-Famous Corn Remover.)

"Gets-It" is a liquid which "Gets-It" is a liquid which dries at once when applied to corns or calluses with the glass applicator that accompanies each bottle. Stops pain at once and soon loosens the corn or callus so that it can be lifted right off.

Used by Many Millions

throughout the balance of the world, and certain of enthu-siastic reception here.

Now Distributed in Great Britain through

THOMAS CHRISTY & CO.

4, 10 & 12 Old Swan Lane, Upper Thames St., London, E.C.4. Manufactured by E. LAWRENCE & CO., Chicago, U.S.A.



Dr. SCHOLL'S Bunion Reducer.

Relieves and reduces bunions and enlarged joints. Eliminates shoe pres:ure. Made of finest surgical rubber.

Men's and Women's Sizes: Rights & Lefts. Price 2/6 ea.

Foot Comfort Appliances

are nationally advertised in all the leading newspap rs and periodicals. Link up with this big publicity by featuring "Scholl" goods strongly in your window-dressings.

Write to-day for Illustrated Catalogue.

The SCHOLL MFG. CO., Ltd., 1-4 Giltspur St., E.C. 1.

A. C. COSSOR & SON

(ESTABLISHED 1859)

CLINICAL THERMOMETERS

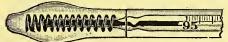
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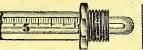
Manufacturers of Clinical Thermometers for over sixty years. CONTRACTORS TO ALL GOVERNMENT DEPARTMENTS.

Original Patentees of the "Easy-Set" Clinical Thermometer.



PATENT







The "ACCOSON" Aseptic Clinical Thermometer.

DO NOT FAIL TO STOCK THIS LINE! EVERY DOCTOR WILL BE Catalogue on Application.

ASKING FOR IT!!

"ACCOSON" WORKS, VALE ROAD, LONDON, N.4.

Telephone: 1880 Tottenham.

Telegrams: "Fracosson, Phone, London."

(1)

GOODS WELL ADVERTISED.

ARE等HALF SOLD.

There are two reasons for the enormous sales of "Fairy Dyes." One is inside the packet—the goodness of the Dyes—their reliability and their low cost. The other is that we spare no effort or

expense to advertise them well.

I. In every leading Ladies' Weekly and Monthly throughout Great Britain clever "copy" and striking illustrations are convincing the public of the superiority and economy of using "Fairy Dyes" and no others where every home need.



I. Do you want to increase your sales, your repeat orders, your turnover, with a dye that is easy to sell because it is so simple and so easy to use? There is a choice of twenty-two shades suitable for cottons, woollens, linens or silk, and already "Fairy Dyes" are recognised to be most reliable and economical.

C. Send us your order now. It is too late when you learn that your competitor has been doing great business with "Fairy Dyes," for the demand for "Fairies" is already very great and growing, and the man who has them in stock is the man who scores. The selling price is 2d. per packet and the public want them from you.

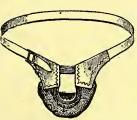
FAIRY DYES, LTD. Regd. Office: 20 RENFREW STREET, GLASGOW.

Regd. Office: 20 RENFREW STREET, GLASGOW.

Telegrams: "Fairyland Glasgow." Phone: 1902 Douglas.

LONDON DEPOT: 292 Upper Street, ISLINGTON, N.1

WE GUARANTEE EVERYTHING WE SELL



Send your Enquiries for Chest Protectors Abdominal Belts Suspensory Bandages Finger Stalls Maternity Corsets Magnetic Belts Wrist Straps Surgical Hosiery, etc. to the Actual Makers:

A.B.FROST & CO. Surgical Hosiery Works. BEESTON, Notts.

ESTABLISHED 35 YEARS.

(3

DOWELL'S PATENT HEALTH PIPES.



SELF-CLEANER.

When the Mouthpiece is removed all foulness is automatically cleared.

Assorted Shapes and Sizes to sell at 3/6 each.

Send postcard for sample dozen.

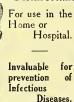
HARWOOD BROTHERS

Est. 1898. Manufacturers of Briar Pipes and Smokers' Articles, S/20 Richmond Street, LIVERPOOL.

THE

"QUEEN MAB" VAPORISING LAMPS

For Vaporising Medicaments, Disinfectants or Perfumes. For use in the



For Perfuming Apartments.

Instantly removes all unp'easant smells from Cooking, etc.



BRASS.

From Prof. W. Lascelles Scott's Report:—A sick-room may be speedily rendered sweet, wholesome, and free from morbine germs or deleterious emanations, by vaporising a little carbolic acid, thymole, or eucalyptus globulus by means of the "QUEEN MAB LAMP."

A Really Good Selling Line for Chemists.

Prices and Particulars from-MAB CO., 73 Newhall Street, BIRMINGHAM.



ELECTRIC POCKET LAMPS

TORCHES, HAND LAMPS, ETC.

The illustration is only one of over 60 varieties we can do from stock.

SAMPLE DOZEN POCKET LAMPS all different, and complete with Refills and Bulbs. Post free.

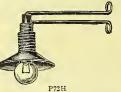
22/6 net.

"A.J.W." SPECIAL CREEN REFILL

is one of the very best made, quite up to pre-war quality.

Per dozen 8/Sample 3 dozen, post free. 24/9 cash,
25/9 booked.

Special prices for quantities and contracts.





PATENT WIRE FITTINGS

for Miniature Screw Bulbs. All patterns at one price, 4/- doz.

ARCHIBALD J. WRIGHT, Ltd. Manufacturing Electricians,

395 CITY ROAD, LONDON, E.C. 1.

NEW LIST NOW PRINTING.

FNCYGLOPÆDIA

ELECTRICA

Now ready, and contains full particulars and illustrations of our wide range of Electrical Supplies, including Pocket Lamps. Torches, Hand Lamps, Medical Coils, etc. etc.

Send for a copy, free on request.



ELECTRICAL FLOWERS AND SCARFPINS.

sorted beautiful Designs. ritted with Pea Lar Cord and Adaptor. Price 10/- doz. net.

Complete with Pocket Lamp Cases and Batteries, 20/- dozen.



HAIRBRUSH.

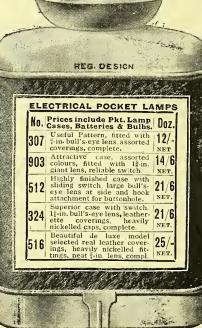
Recommended for promoting growth of hair, removing headaches, etc., 3/4 each net.

The "REDCROSS" Coil.

British Made. Size \$\frac{1}{2} \text{ Size } \frac{1}{2} \text{ Fitted with high speed make and break, ensuring a steady sootbing current which can be regulated from Mild to Powerful. The whole enclosed in a polished hardwood cabinet. Price complete with batteries as

teries, as trated, 33/4 net

For large range from 3/net see logue A21.



The prices quoted above are for the complete Pocket Lamps, including Pocket Lamp Cases, Batteries and Bulbs.



Quality "Jewel"

Metal Filament Bulbs.

Half-Opal 3/- doz. net.



"VOLEX" Guaranteed Pocket Lamp Dry Battery.

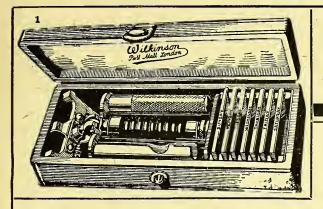
The "LONSDALE" Torch. (As Illustrated.) 63" × 15" Strong and well made. Complete

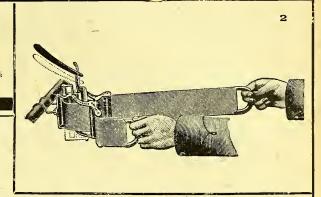
with Battery and Bulb. 24/- doz.net. Spare Batteries, T112, 8/- doz. net.

The "KIT"

7½"-x 1½" A real torch de luxe, heavily nickelled fittings, permanent and flashing switch, complete with Battery and Bulb. 5/8 net.







The WILKINSON SWORD CO., Ltd.

53 PALL MALL, LONDON, S.W.1. Factory-ACTON, LONDON, W.3.

GOOD SELLING LINES

1. Wilkinson's New Model Safety Shaver

The set in Leather Case, as shown, with Stropping Handle and 7 Solid Sword Steel Blades, especially designed for dealing with stiff beards. Blades are released easily by a thumb press and cleaning is very simple. The Roller Guard feeds the lather on to the cutting edge and is delightfully smooth to the face.

2. Wilkinson's Double Action Stropping Machine

For stropping ordinary Hollow Ground Razors, is the most effective on the market; it gives the heel to toe movement that is only attained by the skilled barber.

3. Wilkinson's Sword Steel Razors

Are renowned throughout the world; ask for particulars of their well-known brands—the "Wilkinson Special," "W. and CROWN" and "LANCE."

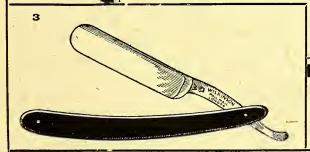
4. Pruners

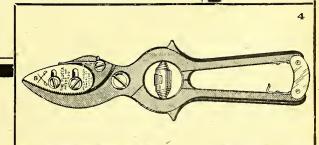
Wilkinson's Pruners, the excellency of the all-important cutting edges is assured by the use of their World-famous Sword Steel,

"Plucca" Pruners are manufactured by the Wilkinson Sword Company, at their Acton Works; the only combined Pruner and Fruit and Flower gatherer on the market; it cuts and holds.

The Wilkinson Cutlery Co., Ltd.

"Tudor House," Rathbone Place, Oxford Street, LONDON, England.





PURE ORANGE WINE A. MILLAR & CO., LTD., DUBLIN

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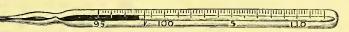
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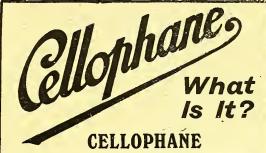
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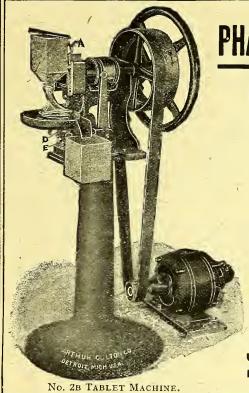
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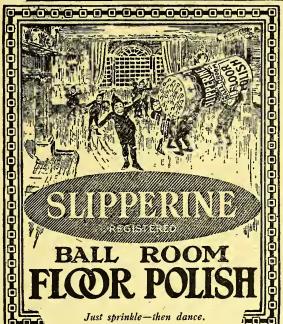
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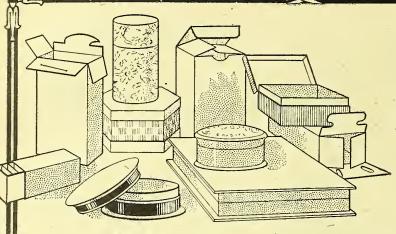
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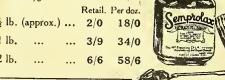
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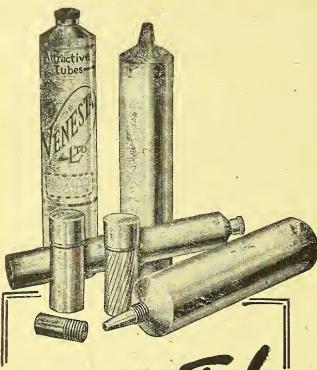
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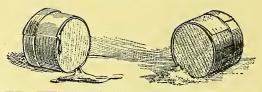
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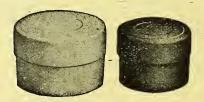
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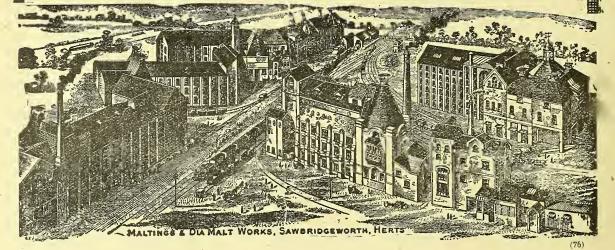
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13.—MIDLANDS.—A Retail and Wholesale Business, comprising small Packed Goods; returns upwards of £12,000 per annum, with scope for development; long lease; terms, stock and fixtures by valuation and premium for lease and goodwill; the investment offers a good opening for two energetic men.

14.—LIVERPOOL (near).—Light Cash Retail Business; returns between £3,500 and £4,000, at good prices; single-fronted shop, modern fittings; amply stocked; held on lease at low rent; further details on application.

STOCKTAKING. **VALUATIONS**

Messrs. O. & Co. desire to emphasize the necessity of a perodical Statement of Account, by which means alone Profit, the value of Business, &c., can be determined. Involving as this does the labour of Stocktaking and Valuation, it is often omitted and eventually becomes the cause of confusion and loss.

Wessrs. O. & Co. are prepared to undertake these essential dutles and make Special Terms for such services.

ORRIDGE & CO., 56 LUDGATE HILL, LONDON, E.C.

VALUERS & TRANSFER AGENTS

35 Jowry Street, Fenchurch Street, E.C.3.

Telephone: 1809 CENTRAL. NO CHARGE TO PURCHASERS.

1. SURREY. Light retail, dispensing and prescribing, in good-class residential town. Returns, £1,500; increasing; low rent; small house; well fitted and stocked. Price, £1,000 cash; suitable for elderly man or qualified lady

2. SOUTH LONDON. Brisk cash retail at good profits. Returns under manager, £2,600; busy market thoroughfare; plenty of scope; rent covered by let-off; good stock. Price £1,550; recommended.

3. LONDON, S.W. Good-class light retail. Returns, £30 weekly under manager. Plenty of scope; main-road position; good stock. Price for quick sale, £750.

WANTED TO PURCHASE.

BERDOE & FISH are anxiously seeking, on behalf of applicants, good sound businesses throughout England and Wales, and will be glad to hear from owners wishing to sell, or to advise those contemplating selling.

STOCKTAKING VALUATIONS.

We are now booking dates for October, and invite early applications for our special terms.

ESTABLISHED 1870.

The Association of Manufacturing Chemists

- LIMITED

Head Offices—26/28 Kimberley House, Holborn Viaduct, London, E.C.1

(and at 2 Bixteth Street, Liverpool).

PARKIN S. BOOTH, Accountant & Valuer. PHONE: CITY 6942.

Stocktaking and Valuations for all purposes undertaken upon Reasonable Terms.

WE HAVE THE FOLLOWING BUSINESSES FOR DISPOSAL.

1.—MIDDLESEX.—Pleasant London suburb; good-class Retail and Dispensing Business, held on good lease at rental of £75 per annum; cash takings about £60 per week; old established; large house attached; no Photo or Optics, but excellent scope for same; nicely fitted and well stocked.

2.—HUNTINGDONSHIRE.—Very nice old-established Country Business, with turno er about £1,200 per annum; well stocked and fitted pharmacy; price £1,000, which includes Freehold Property.

3.—Wholesale Business, dealing chiefly in Toilet Specialities; established four years; excellent connections; good turnover; factory 3,000 square feet, with house adjoining; held on lease of 21 years; fullest investigation invited; balance sheets can be inspected; fullest particulars on application.

4.—LONDON, E.—General Retail and Dispensing; returns about £800 per annum, at good profits; premises held on long lease at £30 per annum, rising in 1922 to £42 per annum; part dwelling accommodation let off at £39 per annum; price £750 or near offer.

· 5.—EARL'S COURT.—Old-established high-class Dispensing and Retail Business; neglected, but with excellent opportunity for energetic Chemist to make a good business; nicely fitted shop, in busy thoroughfare; offers invited.

PARSON C. BAKER, 4 Cyprus Rd., N.3. Tel.: 941 Finchley

WM. ROOKE ROBERTS, M.P.S., F.S.M.C. 174 Victoria Street, S.W.1. Tel.: Victoria 27.

Valuers for Purchase, Sale, Probate, Income Tax, Balance Sheet, Se.

Recommended by The British Drug Houses, Ltd. Messrs. Meggeson. Ltd., Messrs. Barclay & Sons, Ltd., and many other leading Wholesale Houses, Valuers to the Association of Manufacturing C emists.

ERNEST J. GEORGE

EXPERT CHEMISTS' VALUER, STOCK-TAKER AND TRANSFER AGENT.

HAS OPEN DATES FOR STOCK-TAKINGS BETWEEN OCIOBER MARCH, AND WILL ESTEEM ENQUIRIES.

202 BIRMINGHAM ROAD, WALSALL. 5 OSWALD ST., GLASGOW.

CHARLES C. MARSDEN

Valuer, Transfer Agent & Stocktaker,

44 Sholebroke View, Chapeltown Road, Leeds. Special Terms for Stocktaking and Pricing of Chemists' own Stock Sheets. All Valuations have the personal attention of C. C. Marsden.

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60 Bartholomew Close, LONDON - - E.C. 1

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Under the direct supervision of our Expert and Licensed Valuer, Mr. George Brown.

Valuer, Mr. George Brown.

We invite enquiries relative to STOCKTAKING
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also for valuations for PROBATE and
TRANSFER OF BUSINESSES.

Special Terms for Annual
Stocktakings.

REXALL BOOT PROPOSALS.

A MEETING of all those Agents who are opposed and have not signed the agreement will be held on the 22nd September at the Imperial Hotel, London, for the purpose of consolidating the opposition and to decide on a definite course of action.

Agents from the following towns will attend. Full particulars will be sent to any other Revallites who are opposed and not yet

F. CLARKE, 25 High Street, Newport.

W. P. LEAN, 22 High Street, Burton-on-Trent.

Eastleigh. Wellingborough. Hastings. Yeovil. Aberdeen. Colwyn Bay. Derby. Carmarthen. Stafford. Wednesbury. Crowthorne Edinburgh. Wellington. Swansea. Liverpool. Stroud. Weymouth. Redditch.

Folkestone. Romford.
Blackpool.
Ross (Mon.).
Bournemouth. London.
Hendon, N.W.
London, S.W.
Aberavon.
Chorley.
Hoddesdon, Herts'. Jersey Gillingham. Neath. Rushden. Frome. Ryde.

King's Lynn. Market Weighton. Cheltenham. Maidstone. Llandrindod Wells. Aberdare. Shepherd's Bush, W. Windsor. Darwen. Burton-on-Trent. Cardiff. Newport. Southampton. Hereford. Perth. Barnstaple. Reading.

TENDERS.

SEVERALLS MENTAL HOSPITAL, COLCHESTER.

THE Committee of Visitors invite Tenders for the supply of DRUGS for the three months ending 31st December, 1921. For forms of tender apply, enclosing stamped addressed envelope, to Mr. R. Overend, Clerk of the Hospital, Severalls, Colchester. Sealed tenders must be received not later than Saturday, 24th Sentember 1921. 24th September, 1921.

The Committee do not bind themselves to accept the lowest or

any tender.

By Order, H. H. GEPP, Clerk to the Visitors.

BUSINESSES FOR DISPOSAL,

6s. for 50 words or less; 6d. for every additional 10 words or less, prepaid.

The Advertiser may, if preferred, have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

DEVONSHIRE.—Through ill-health of proprietor; excellent corner and four-crossway position; suburb of large town; residential and working middle class; centre large population; no Drug Store near; turnover £1,500, capable of increase; N.H.I., good Prescribing and Dispensing; mahogany fittings built by this Paper.

WEST OF ENGLAND.—Genuine old-established good-class Business; excellent profits; easily worked; good living accommodation; long valuable lease; unique opportunity; valid reason for disposal; immediate transfer sacrifice for £1,900; particulars in return for bankers' reference. Apply 215/16, Office of this

FOR Sale, a well-established Wholesale Drug Business, centrally situated, and fitted with modern plant, electric and steam power. Apply 213/26, Office of this Paper.

FOR Sale, old-established Chemist and Druggist Business in North-East Lancashire; annual turnover about £4,500. For further particulars apply 15/61, Office of this Paper.

PROFITABLE Drug and Herbal Business, with Photo, in main street of industrial Lancs town; price £700; returns £27 per week; house (unattached) can be let with shop; sound reason for disposal. Apply 214/6, Office of this Paper.

PROPRIETARY Article for Sale; has been well advertised, and the business is steadily increasing; stocked by Boots, Taylor, and all the leading Chemists in United Kingdom; lack of capital only reason for disposal. Write in first instance to 32/85, Office

AGENCIES.

he Advertiser may, if preferred, have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-

BELGIUM and France.—Agent wanted, with established connection, to introduce very saleable novelty produced by Chemist. Correspondence invited, addressed to 214/330, Office of this Paper.

RISH Agencies Wanted.—Representative, travelling Ireland, own car, visiting Medical, Dental, Veterinary Surgeons, Hospitals, Chemists, open to introduce products of good houses, British, American, or Continental; suggested lines: Pharmaceutical Proprietaries, Surgical Instruments, Dressings, Dental Rubbers and Sundries, Packed Chemists' Counter lines, Household and Toilet; exceptional connection, credentials, and guarantees; correspondence invited. "Bayard" (215/31), Office of this Paper.

AGENT or Traveller, with established connection, wanted to sell, in conjunction with existing lines, well-known Mincral Water among Chemists and others; liberal commission. Write "Y. G.," c/o J. W. Vickers & Co., Ltd., 5 Nicholas Lane, E.C. 4.

OLD-ESTABLISHED firm in North of England, contemplating adding Chemists' Sundries Branch to business, invite correspondence from actual Manufacturers of all kinds of Chemists' Sundries, etc.; open to buy in large quantities; British or foreign. Full particulars and prices to 37/25T, Office of this Paper.

PARTNERSHIPS.

6s. for 50 words or less; 6d. for every additional 10 words or less, prepaid.

The Advertiser may, if preferred, have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

PHARMACEUTICAL Chemist, with extensive manufacturing experience, wishes to correspond with firm having facilities for manufacture and distribution, with view to a working arrangement; business need not be on a large scale at present, but must be capable of future development to any extent; advertiser can produce wide range of Pharmaceutical Specialities, Toilet and Perfumery Goods, Soaps, etc.; small capital available. Apply 215/9, Office of this Paper.

WANTED, a Partner in a Wholesale Chemist's business; capital required about £5,000; all necessary information supplied. Apply 213/260, Office of this Paper.

YOUNG Chemist, with capital, required to join old-established firm; knowledge of small Wholesale and Packed Goods; to manage department and travel; able to drive car; a real opportunity for one with a desire to make good. Apply 214/33, Office of this Paper.

BUSINESSES WANTED.

6s. for 50 words or less; 6d. for every additional 10 words - or less, prepaid.

The Advertiser may, if preferred, have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

KETTERING OR DISTRICT.—Business required, doing turnover of £2,000 to £4,000; smaller business considered if scope; repries treated in strict confidence; references exchanged. "Rutland" (196/6,, Office of this Paper.

MANCHESTER or Suburb.—Business wanted, with house and stock room; turnoyer about £40 per week; state price, lease (if any), and full particulars; neglected business not objected to. Apply 215/1, Office of this Paper.

A DVERTISER desires to purchase, for prompt cash, Business in good-class locality, preferably on East or South Coast; bankers' and trade references given. "Leona" (214/29), Office of this Paper.

CHEMIST requires small Business, with house attached, in Southern Counties; town or country; eash available £300. Particulars as to rent, lease, rates, and turnover in first letter to "Alpha" (214/28), Office of this Paper.

DESIRED to purchase, good Mixed Business, Lancs or Yorks preferred, with turnover £3,000 to £4,000; opening for Photo; Wine Licence if possible, but not essential; replies treated in confidence, and bankers' references exchanged; will take over at once and pay cash. Reply to "Genuine" (215/32), Office of this Paper.

PHARMACIST desires to purchase (immediately) a genuine Business, town or country, with turnover of about £5,000; must be capable of considerable increase, in good position, suitable for a progressive man with modern methods; cash available. Full particulars, treated in strictest confidence, "Immediate" (214/20), Office of this Paper.

WANTED, Retail Business or Drug Stores in Manchester or area; busy main road for preference, with scope for enterprise; cash transaction. Apply 214/34, Office of this Paper.

WANTED, soon (or within 6 months), good-class Retail and Dispensing Business, and preferred if sufficiently large to keep at least one Assistant, and with private entrance to house. Fullest particulars in first letter (and which will be treated as private) to Mr. Francis, 1 Lansdown Road, Royal Park, Clifton, Bristol.

SITUATIONS OPEN.

RETAIL.

6s. for 40 words or less; 6d. for every additional 10 words or less, prepaid.

The Advertiser may, if preferred, have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

BARNSTAPLE.—Junior or Improver; outdoors; September 26th; Dispensing and Photography; state salary and experience. Battershill, Pharmacist.

BRADFORD.—Junior Assistant, with good Dispensing and Counter experience; outdoors; state full particulars and salary required. W. E. Metcalfe, Pharmaceutical Chemist, Saltaire.

BRISTOL.—Young unqualified Assistant wanted; must be quick and reliable; outdoors; easy hours. Send photo, and state age, experience, and salary required, to Burnett & Turner, 12 Chandos Road, Redland, Bristol.

L ONDON.—Smart Juuior Assistant (unqualified) required; Counter, Dispensing, and Photography; state salary and usual particulars. Apply 214/19, Office of this Paper.

 $L^{\rm ONDON.-Unqualified\ Junior\ (outdoors)\ required,\ at\ end\ of\ September,\ for\ high-class\ Retail\ and\ Dispensing\ business;\ state\ age,\ experience,\ and\ salary\ required.\ "Kensington"\ (P.C.B.\ 33/27),\ Office\ of\ this\ Paper.$

L ONDON, E.C.—Unqualified Assistant (male), not over 25, for Light Retail and Dispensing business; hours 9 a.m. to 7 p.m.; no Sunday or Bank Holiday duty. Apply Scott, Warner & Co., 55 Fore Street, E.C.

L ONDON, W.—Unqualified Assistant; West-End experience; hours 8.30 till 7, 1 o'clock Saturday, no Sunday or holiday duty. Apply F. Jeacock, Goss, Ltd., 460 Oxford Street, W.

L ONDON, W.—Manager, qualified; age about 40; good Prescriber and Counterman; good references very necessary. State salary and experience to 215/36, Office of this Paper.

PORTSMOUTH.—Junior unqualified Assistant, capable, willing, and trustworthy, for cash business (Photographic). State age, height, experience, and salary (outdoors) required, when disengaged, H. A. Elliott, M.P.S., Dispensing Chemist, 73 London Road, Portsmouth.

A JUNIOR or Improver, male, wanted at once (outdoors) for good-class Family and Dispensing business; must be careful and accurate, good Counterman, and accustomed to Photographics. Apply, with fullest particulars and salary desired, or interview, Slade, Station Parade, Kew Gardens.

 $\Lambda^{\rm SSISTANT}$, unqualified (outdoors), in an old-established Dispensing and Family business; must be a quick and accurate Dispenser; hours light; state experience, age, height, and salary; enclose photo, to be returned. Tayler, Chemist, Sherborne, Dorset.

A SSISTANT (male), young, wanted, September 26th, for South Wales Colliery district; must be accustomed to brisk Counter trade and N.H.I. Apply, giving full particulars, salary required, and enclosing photo (if possible), to "Salicyl" (215/7), Office of this Paper.

CAPABLE male Assistant wanted, age 20 to 25 years, in Mixed Dispensing business; some knowledge of Photography desired; outdoors; state salary and references. Apply Wm. Highley, M.P.S., Rochdale.

JUNIOR, October 3rd (about); Retail and Dispensing; outdoors; must be careful Dispenser; applications not answered in 3 days declined; please send particulars as to age, height, references, and salary. Rees, 31 High Street, South Norwood, S.E. 25.

JUNIOR Assistant or Improver wanted at once (indoors); one 'with good knowledge of Photography; easy hours and good home. Apply, giving full particulars, references, and salary required, to Christopher, Chemist, Much Wenlock, Salop.

JUNIOR, unqualified but competent, for Counter and Dispensing. Full particulars, salary, and references to Wood, Chemist, Stafford.

L OCUM, qualified, required for fortnight about September 26th. Apply, giving two references and salary, Davies, 37 Grosvenor Road, Bristol.

MESSRS. COOPER, SON & CO., LTD., 24 Sloane Street, London, S.W. 1, require (immediately) a young, energetic Assistant for the Dispensing Counter; must have had the best Dispensing experience. Apply to B. S., at above address.

PHILIP HARRIS & CO., LTD., Pharmaceutical Specialists, Birmingham, require the services of a well-educated young Pharmacist (qualified preferred); good appearance, polished manners, and superior knowledge essential; permanent and progressive opportunity.

PELIABLE Assistant wanted, unqualified, for Dispensing and Counter work. W. K. Somerton, 357 Battersea Park Road, S.W. 11.

REQUIRED, Assistant, unqualified (outdoors), young, good Counterman and reliable Dispenser, with knowledge of Photography and Window-dressing. In reply, please state age, salary required, and full particulars to Douglas Harbottle, Chemist, 148 Crwys Road, Cardiff.

S.T. THOMAS'S HOSPITAL, S.E. 1.—Assistant Dispenser, Major, male. For particulars apply, personally if possible, to J. A. Jennings, Pharmaceutist.

WANTED, an Assistant in Light Retail, N.H.I. Dispensing and Photographic business; usual hours; no Sunday duty; outdoors; applicants please state references, salary required, and usual particulars. H. S. Cox, M.P.S., Chemist and Optician, Ketteriug.

WANTED, Junior or Improver; outdoors; time for afternoon study if required; N.H.I. and middle-class trade. Apply, with full particulars and salary required, to Watson, 100 Mitcham Road, Tooting Broadway, S.W.

WANTED, in a lovely country town in Devon, elderly qualified man to conduct a widow's business with the help of an Assistant; very light duties and nominal salary; no Sunday duties; abstainer and Churchman preferred. Apply 213/32, Office of this Paper.

WHOLESALE,

6s. for 40 words or less; 6d. for every additional 10 words or less, prepaid.

A SSISTANT required for the Showroom of old-established Wholesale Sundries and Packed Goods house; must have knowledge of Chemists' requirements. Send particulars, in confidence, to "Sales Manager" (25/16N), Office of this Paper.

CAPABLE, experienced Works Chemist required by leading firm of Flour Millers. Apply, stating age, experience, credentials, and salary required, P.C.B. 32/34, Office of this Paper.

EXPERIENCED girl for packing Perfumery and Medicinal Preparations; state experience and wages. Roberts & Co., 76 New Bond Street, London.

GIRL wanted, used to making Medicated Suppositories. J. Woolley, Sons & Co., Ltd., Knowsley Street, Cheetham,

LABORATORY Assistant required (spare time) for N. London; experienced in Creams, Compacts, etc. Apply, stating terms, to 45/39B, Office of this Paper.

LEADING house of Manufacturers of Packed Pharmacy Specialties and Compressed Tablets require additional Representatives for London and for South Wales and South-Western Counties. Applications are only desired from salesmen with a live connection in these districts; gentlemen who are ambitious run their own cars and are real live wires, not order takers, who can develop and organise their territory. A high standard of efficiency will be expected and a liberal rate of remuneration paid. Give us all details in your first letter not forgetting evidence of what you are at present doing, the firms you have represented, and for how long. Apply 32/84, Office of this Paper.

MESSRS. C. J. HEWLETT & SON require a competent Boughtquick, accurate, and have good references. Apply, by letter only, giving age, salary, etc., to B. L. C., 35-42 Charlotte Street, London, E.C. 2.

OLD-ESTABLISHED firm, manufacturing Medicated and British Pharmacopeia Lozenges, Pastilles, Jubes, Wafers, Pellets, Floral and Silver Cachous, etc., etc., require first-class Representatives for Scotland, North and South Wales, and the following counties: Yorkshire, Laneashire, Cheshire, Derbyshire, Nottingham, Lincoln, Monmouth, Kent, Surrey, Sussex, Hampshire; liberal commission basis. Particulars, 34/42, Office of this Paper.

PACKING AND DISPATCH DEPARTMENT.—Foreman required by well-known provincial house; must be energetic, systematic, accustomed to home and export trade; previous similar experience essential. Full particulars and wages expected to 42/52, Office of this Paper.

REAL live Salesmen wanted with good connections among Retail Chemists to sell exquisitely packed Toilet Requisites, etc., at competitive prices; packages sell at sight; splendid opportunity for pushing man; generous commission. Full particulars, in confidence, to P.C.B. 30/21, Office of this Paper.

REPRESENTATIVE wanted for the Midlands and the North to sell Malt Extract preparations; must have a connection with Wholesale Chemists in these parts. Write, stating full particulars, to Peptine Maltine, Ltd., 19-21 Queen Victoria Street, E.C. 4.

REPRESENTATIVE required, with first-class provincial connection in the Glass Bottle trade; a knowledge of Drugs would be advantageous. Apply 45/34B, Office of this Paper.

REPRESENTATIVE, required for the South Coast; old-established Sundry and Packed Goods house; connection not essential, but man must have full knowledge of Retail Chemists' requirements; would entertain Chemist's Assistant anxious to get on the road. Write, giving full particulars, in confidence, to "Sales Manager" (25/17N), Office of this Paper.

STOCKTAKING.—Wanted, smart young man, accustomed to Stocktaking and Valuation of Chemists' businesses; good experience essential, and with a knowledge of Bookkeeping and Accountancy. Apply, giving full particulars and salary required, to 214/37, Office of this Paper.

WANTED, a thoroughly experienced Compounder and Manufacturer of Soluble Flavouring Essences; experience with a reputable firm absolutely essential. Write, stating terms and particulars, 25/15N, Office of this Paper.

RETURNING PHOTOS, &c.

Advertisers in this section who receive portraits and copies of testimonials from applicants with a stamped addressed envelope for reply are reminded that the undue retention of these often means a hardship to the sender. All personal documents should be returned as promptly as

SITUATIONS WANTED.

[HOME.]

RETAIL.

2s. for 18 words or less; 6d. for every additional 10 words or less, prepaid.

The Advertiser may, if preferred, have replies addressed to this Office, and forwarded on payment of an additional charge of 1/~

A.A.A.-PHARMACIST, 34, 17 years' experience London desires berth as Manager; provinces preferred; excellent references; nine years present berth. Apply "Aspirin" (213/31), Office of this Paper.

A QUALIFIED Chemist as Manager or Assistant; 20 years' experience; permanency desired. Davies, Ty Cwrdd, Llwynhendy, Llanelly.

A CTIVE, reliable Assistant, 31, married, West-End experience, requires permanency in West-End, City, or local; accustomed to take charge; good Dispenser and Salesman; highest references; unqualified; early October. W. Sims, 14 Hythe Road, Thornton Heath, Surrey.

A DVERTISER, young, energetic, desires position; thoroughly reliable, trustworthy; excellent references; good experieuce Counter, Dispensing, Photographic, and Window-dressing. Apply 215/14, Office of this Paper.

A PPRENTICESHIP required to Chemist (near Bromley) by girl (17) leaving County School, Bromley; quainfied for entrance to Pharmaceutical Examination. Write 6 Albert Road, Bromley Common, Kent.

A S Assistant Dispenser; age 27; married; three years' experience as Assistant Dispenser and Dresser. M.L. 75250, Office of this Paper.

As Locum; highest references; well recommended; London or provinces; winter terms. Brown, 74 West Hill, East Putney, London, S.W. 15.

A SSISTANT (23) desires permanency; competent Dispenser and Counter hand; good knowledge Photography; disengaged 24th October. Thompson, 11 Old Pier Street, Walton on Naze.

A SSISTANT (22), tall, seven years' experience, unqualified, desires situation; North of England or Midlands; free middle of October. G. Dawson, 15 Wallfield Crescent, Aberdeen.

A SSISTANT (23), Part I. qualification, requires part-time situation, in or near London. Brown, Oakdene, Oxford Street, Clecthorpes.

A SSISTANT or Branch; 38; good experience in Retail, Dispensing, and Extracting; unqualified. Turner, 44 Macfarlane Road, Shepherd's Bush, W. 12.

A SSISTANT, qualified; experienced in Dispensing (private and N.H.I.), Photography; 23; single. Thirlwell, Rosedale Terrace, Willington, Co. Durham.

A SSISTANT; 19; 3 years' apprenticeship; Junior and Senior Cambridge; Photographic; conscientious; taft; excellent references; requires situation, locality a School of Pharmacy; indoors; facilities for study; disengaged end of September. Replies, stating salary offered, to J. E. Marshall, Fair View, Kirton Lindsey, Lincs.

A SSISTANT or Manager, unqualified; good Salesman and Counterman and all-round experience in Window-dressing, Prescribing, etc.; well recommended; take sole charge; energetic and ambitious; permanency required. Salary and hours to 208/27, Office of this Paper.

A SSISTANT, unqualified, 33, good experience, both Wholesale and Retail, wants post as Manager, Drug Stores; South Coast preferred. Apply 215/22, Office of this Paper.

BATH, Bristol preferred; Assistant; unqualified; 15 years' experience, London; good leugthy references. "Reliable," 1 Canton Place, Walcot, Bath.

RIGHTON or District.—Assistant; unqualified; tall; 21; thorough experience high-class Dispensing and Retail; excellent references. Heasman, 44 London Road, Ipswich.

M

DISPENSER or Chemist's Assistant; 21; 4 years' experience as Apprentice and Assistant. M.L. 590, Office of this Paper.

DISPENSER, qualified, seeks position; South Coast, Bournemouth area preferred. Apply 199/11, Office of this Paper.

EVENING.—Part-time or Locum work; Shop or Institution; experienced male; London district; good references. Apply 214/32, Office of this Paper.

EX-SERVICE man, 22, with good theoretical knowledge of Chemistry; one year's practical experience in Chemical factories; educated Secondary School, University of Wales. Apply "M.L." 7238/21, Office of this Paper.

EASTERN COUNTIES preferred (not essential); Manager, Assistant, or Locum; qualified; 27; thoroughly experienced; excellent references; permanency with view to succession entertained. F. Curtis, 7 Burton Street, Lowestoft.

EXPERIENCED Chemist desires post; excellent references; London, Continental, and provincial experience, Managership, etc. Apply 211/15, Office of this Paper.

JUNIOR; unqualified; highly recommended by employer; energetic worker; splendid clean Dispenser; good knowledge Photographic; excellent Counter hand; three years' apprenticeship, 12 months as second in shop, four kept; take situation immediately; London preferred. Apply Gadd, Chemist, Minehead.

JUNIOR; age 20; good experience Dispensing, Counter, and Photography; good references; Midlands preferred. S. Monk, Ellesmere Avenue, Alfreton.

TADY (Apothecaries' Hall) requires post with Doctor or Chemist; four years' experience; good appearance. Apply 214/15, Office of this Paper.

LADY Dispenser, experienced, requires post; knowledge of Bookkeeping. Apply 212/10, Office of this Paper.

ADY Dispenser (Hall) desires post; Chemist, Doctor, or Institution; London preferred; Bookkeeping. Miss M. Ashford, Gillingham, Beccles.

LADY Dispenser-Bookkeeper desires post with Doctor or Institu-tion; Hospital experience; Hall certificate. Apply S., 10 Gauden Road, Clapham, S.W. 4.

LADY (Hall), experienced Institution (Civil and Military) and private practice, disengaged 22nd, Bookkeeping, would accept Locum. Apply 215/35, Office of this Paper.

LOCUM; experienced; take entire charge; disengaged 25th inst. onwards; reasonable terms. "Chemicus," c/o Greenfield, Hunters Bar Pharmacy, Sheffield.

L OCUM, disengaged after September 25; reliable, experienced, qualified. M.P.S., 20 Cambridge Crescent, Edgbaston, Birmingham.

LOCUM, qualified; excellent references; London or suburbs; discngaged. Apply 215/34, Office of this Paper.

M.P.S. DESIRES post in North; good Dispensing experi-ence; excellent references; open any date. Simpson, 14 Charles Street, Leigh, Lancs.

M.P.S., F.S.M.C., requires position middle of October; excellent Pharmaceutical and Optical experience.
A. E. Thompson, Loakes House, High Wycombe, Bucks.

MEDICAL Dispensing or Hospital, as Second; Student Asso-ciate (woman); Hospital training and Retail experience; age 25; Hall certificate 1919; S. Wales preferred, not essential. Apply 213/3, Office of this Paper.

NORFOLK.—Assistant requires situation in or near Norwich; nuc months at ".Square"; 22; tall; good experience, with first-class references; willing to wait for vacancy. Apply 215/20, Office of this Paper.

PART-TIME berth in London (mornings and school holidays); qualified; six years' experience in City and residential suburb. Apply 214/39, Office of this Paper.

PERMANENCY required by ex-Service man, 26 years of age, in county town of Derby; excellent references; good all-round experience in Dispensing and Counter work, etc.; not afraid of work; either Wholesale or Retail; passed part of Minor examination. State salary and usual particulars to "Advertiser," 28 Langley Street, Derby. Langley Street, Derby.

PHARMACIST (lady), Minor, Square trained, requires post, Hospital or Retail, immediately. Hughes, 606 Harrow Road, Paddington.

QUALIFIED, married, requires post as Branch Manager; shop with house attached preferred. Offers to 214/5, Office of this Paper.

QUALIFIED Dispenser; free October 6th; reference 32 years; daughter of medical man. W., 110 Lower Richmond Road,

QUALIFIED (28); useful Dispensing experience, Shop and Hospital; good knowledge of Agricultural work and Photography; good references; town or country. W._Fluck, Clint Cottage, Navenby, Lincoln.

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